

### 1. Overview

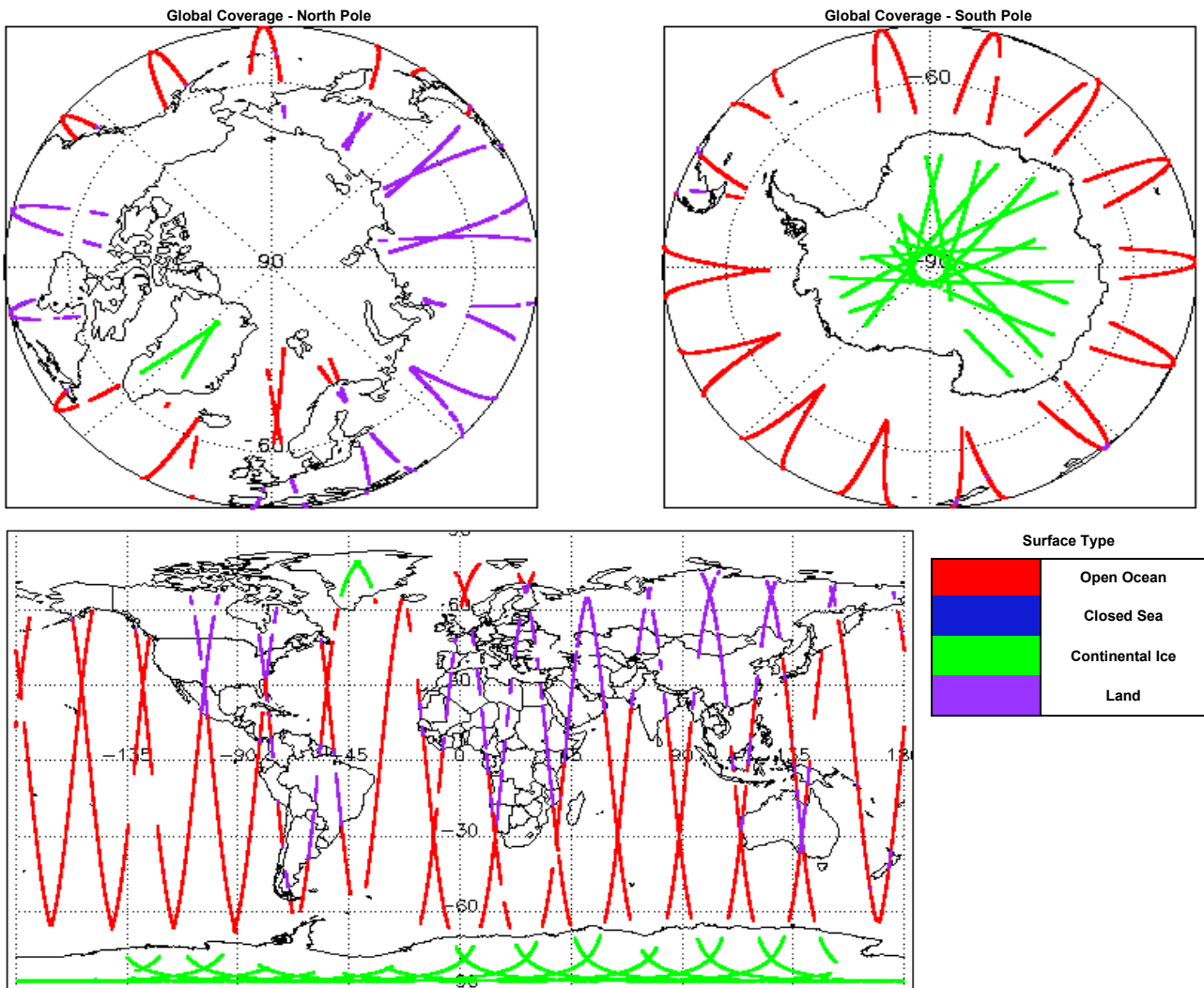
<b>Report Production Date:</b>	05-May-2017
<b>Processor Used:</b>	CryoSat Ice Processor
<b>Data Used:</b>	L1 and L2 Fast Delivery Marine (FDM) Mode and L0 Data

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**

03-May-2017	None
04-May-2017	None
05-May-2017	Nothing planned

### 2. Global Coverage



### 3. Instrument Configuration

The SIRAL instrument configuration for the day of acquisition is provided below.

<b>SIRAL instrument(s) in use:</b>	SIRAL - A
<b>Star Tracker(s) in use:</b>	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: 6

Product	Test Failed
CS_OPER_SIR1SAR_0_20170504T083757_20170504T083847_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0_20170504T163305_20170504T164048_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0_20170504T133055_20170504T133213_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_0_20170504T025603_20170504T030052_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0_20170504T040730_20170504T041032_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0_20170504T182122_20170504T182929_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: 4

Product	Test Failed
CS_OFFL_SIR_FDM_1B_20170504T180358_20170504T180854_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20170504T194530_20170504T194624_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20170504T212437_20170504T212553_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20170504T230519_20170504T230740_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: 5

Product	Test Failed	Description
CS_OFFL_SIR_FDM_1B_20170504T030110_20170504T030145_C001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_FDM_1B_20170504T180358_20170504T180854_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20170504T194530_20170504T194624_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20170504T212437_20170504T212553_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20170504T230519_20170504T230740_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: 35

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20170504T003126_20170504T004857_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__20170504T012159_20170504T013425_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__20170504T020122_20170504T021145_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__20170504T021325_20170504T022757_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__20170504T024348_20170504T024448_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__20170504T030218_20170504T030537_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__20170504T030700_20170504T031410_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__20170504T034547_20170504T040705_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__20170504T042051_20170504T044649_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__20170504T052126_20170504T054655_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__20170504T061725_20170504T063321_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__20170504T065731_20170504T071728_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__20170504T073937_20170504T081339_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__20170504T084931_20170504T090547_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__20170504T091911_20170504T094126_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__20170504T094412_20170504T095337_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__20170504T105857_20170504T113155_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__20170504T114822_20170504T115515_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__20170504T123809_20170504T130656_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__20170504T135043_20170504T140146_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__20170504T141722_20170504T143212_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__20170504T143351_20170504T143634_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__20170504T151914_20170504T154313_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__20170504T155656_20170504T162052_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__20170504T164750_20170504T172205_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__20170504T173556_20170504T180140_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__20170504T182929_20170504T184419_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__20170504T184953_20170504T190119_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__20170504T193931_20170504T194105_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__20170504T200549_20170504T204015_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__20170504T205328_20170504T205623_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__20170504T210708_20170504T211242_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__20170504T214541_20170504T215429_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__20170504T215715_20170504T221911_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__20170504T224552_20170504T225454_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: 5

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20170504T030110_20170504T030145_C001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_2__20170504T180358_20170504T180854_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20170504T194530_20170504T194624_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20170504T212437_20170504T212553_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20170504T230519_20170504T230740_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: 21

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20170504T003126_20170504T004857_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__20170504T012159_20170504T013425_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.





## 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_	143	143	143	0	0
SIR1SAR_0_	110	110	110	0	0
SIR1SIN_0_	100	100	100	0	0
SIR2SIN_0_	106	106	106	0	0
SIR_FDM_1B	143	143	143	0	0
SIR_FDM_2	143	143	143	0	0

### 7.1 QCC Errors

Number of QCC reports with errors: 0

### 7.2 QCC Warnings

Number of QCC reports with warnings: 0

### 7.3 Missing QCC Reports

Number of products with missing QCC reports: 0