

1. Overview

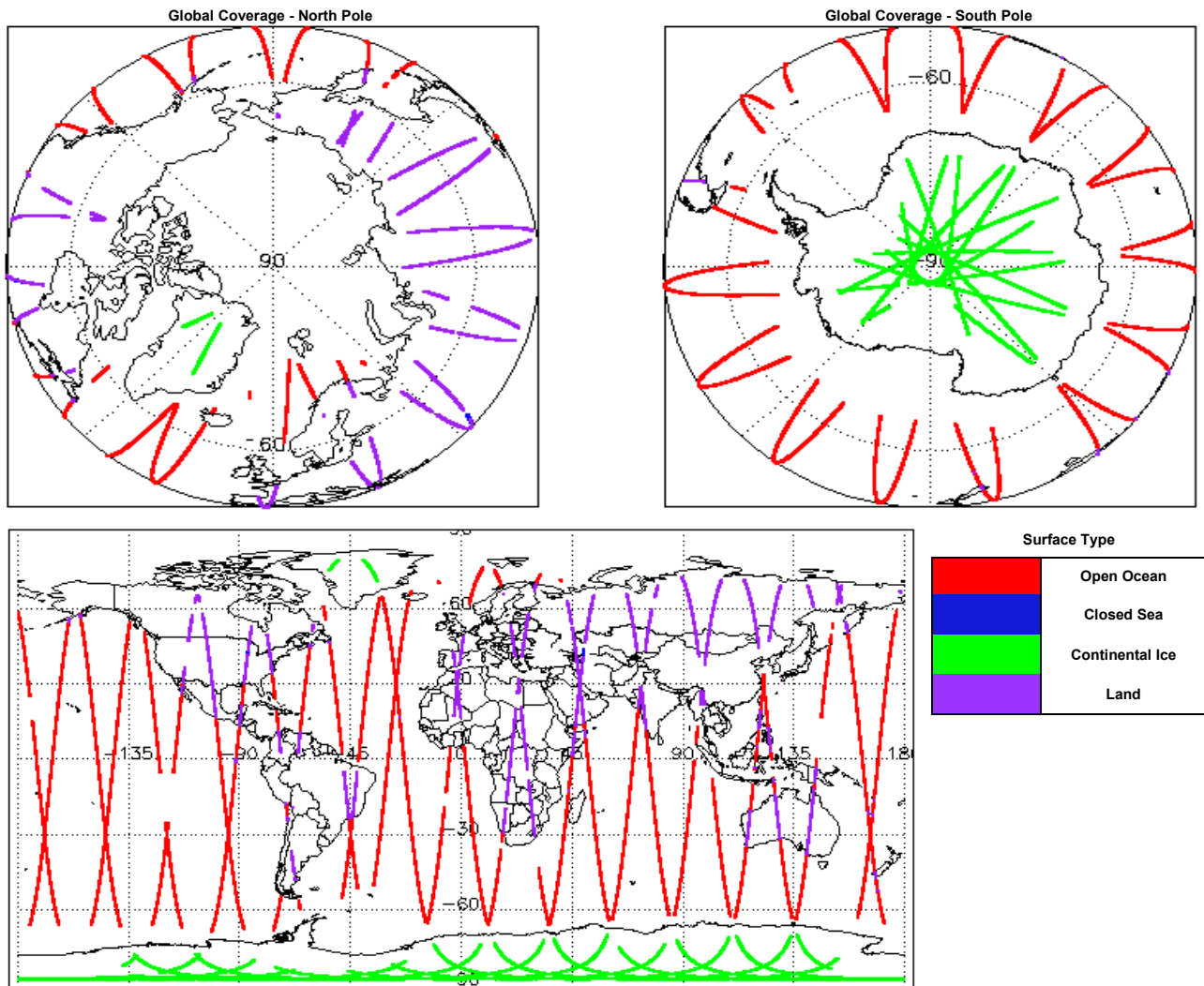
Report Production Date:	07-May-2019
Processor Used:	CryoSat Ice Processor
Data Used:	L1 and L2 Fast Delivery Marine (FDM) Mode and L0 Data

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

03-May-2019	None
04-May-2019	None
05-May-2019	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: 14

Product	Test Failed
CS_OPER_SIR1SAR_0_20190504T174826_20190504T175403_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0_20190504T101034_20190504T101231_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0_20190504T014553_20190504T014933_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0_20190504T050007_20190504T050226_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0_20190504T233213_20190504T233233_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0_20190504T200744_20190504T200815_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0_20190504T114142_20190504T114858_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_0_20190504T083238_20190504T083405_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_0_20190504T141335_20190504T142026_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_0_20190504T050857_20190504T051314_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_0_20190504T142659_20190504T143022_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_0_20190504T222852_20190504T223227_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0_20190504T151605_20190504T151906_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0_20190504T163210_20190504T163332_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: 2

Product	Test Failed
CS_OFFL_SIR_FDM_1B_20190504T045839_20190504T045913_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20190504T081229_20190504T081351_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: 4

Product	Test Failed	Description
CS_OFFL_SIR_FDM_1B_20190504T012309_20190504T013233_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_20190504T045839_20190504T045913_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20190504T051519_20190504T051805_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_20190504T081229_20190504T081351_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: 33

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20190504T001545_20190504T003339_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__20190504T003454_20190504T004841_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__20190504T010540_20190504T012107_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__20190504T012309_20190504T013233_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__20190504T015800_20190504T015836_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__20190504T020011_20190504T021154_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__20190504T033720_20190504T034643_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__20190504T034712_20190504T041053_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__20190504T052152_20190504T053235_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__20190504T060310_20190504T063139_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__20190504T065525_20190504T072831_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__20190504T074152_20190504T074804_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__20190504T083405_20190504T090750_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__20190504T092110_20190504T094044_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__20190504T101231_20190504T104609_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__20190504T110037_20190504T112906_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__20190504T115424_20190504T115517_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__20190504T120806_20190504T122534_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__20190504T133758_20190504T134729_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__20190504T134808_20190504T134825_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__20190504T143023_20190504T143209_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__20190504T152645_20190504T154340_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__20190504T155733_20190504T162100_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__20190504T165753_20190504T172319_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__20190504T173656_20190504T174826_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__20190504T175403_20190504T180923_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__20190504T183450_20190504T185637_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__20190504T185645_20190504T190312_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__20190504T191616_20190504T195036_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__20190504T220213_20190504T220656_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__20190504T223502_20190504T224044_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__20190504T224053_20190504T230814_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__20190504T233233_20190504T235630_C001	Sea State Bias Correction	There is an error with the 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: 4

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20190504T012309_20190504T013233_C001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_2__20190504T045839_20190504T045913_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20190504T051519_20190504T051805_C001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_2__20190504T081229_20190504T081351_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: 19

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20190504T010540_20190504T012107_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_	153	153	153	0	0
SIR1SAR_0_	124	124	124	0	0
SIR1SIN_0_	105	105	105	0	0
SIR2SIN_0_	109	109	109	0	0
SIR_FDM_1B	153	153	153	0	0
SIR_FDM_2	152	152	152	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