

### 1. Overview

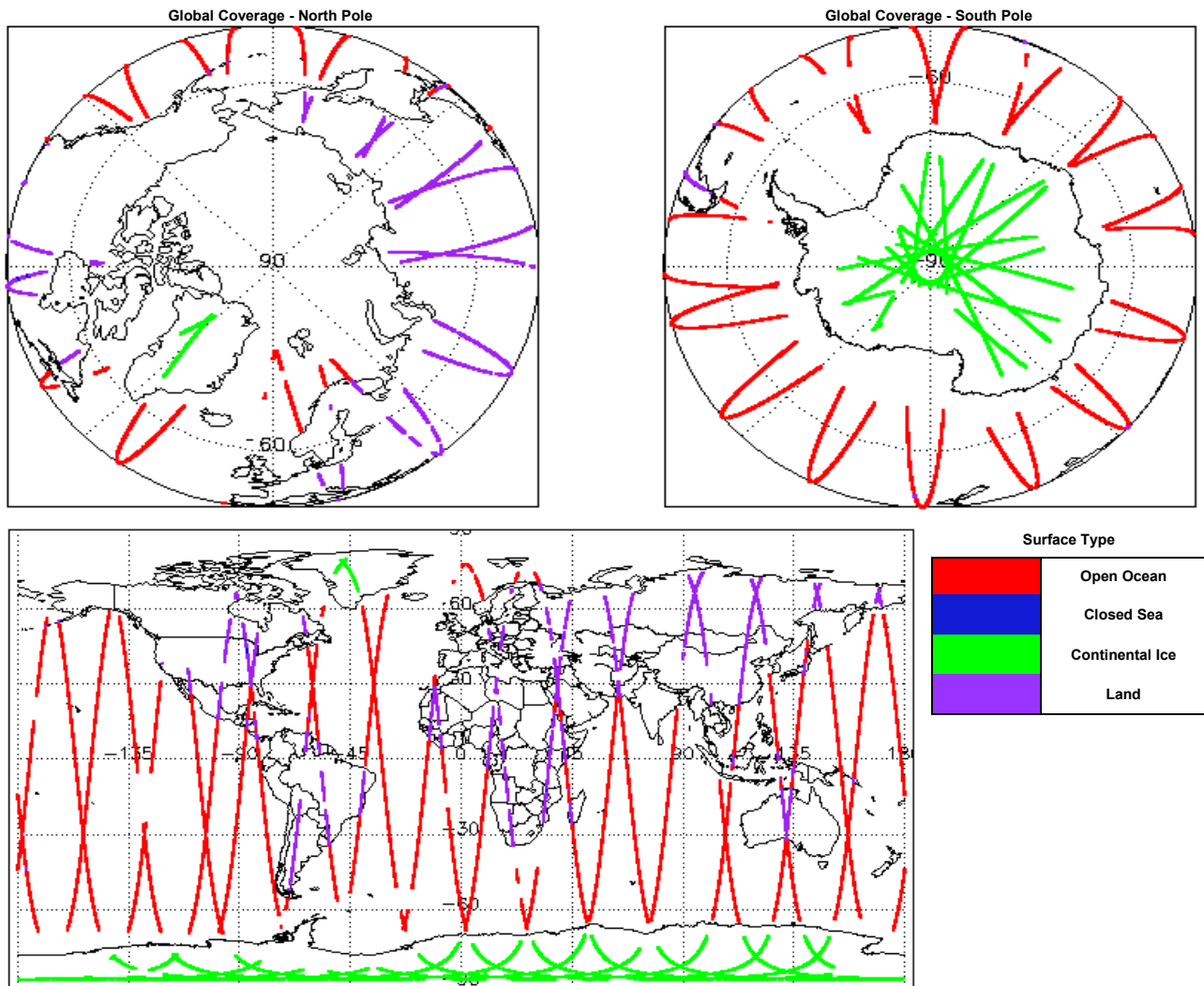
|                                |   |
|--------------------------------|---|
| <b>Report Production Date:</b> | 27-Mar-2018   |
| <b>Processor Used:</b>         | CryoSat Ice Processor                                 |
| <b>Data Used:</b>              | L1 and L2 Fast Delivery Marine (FDM) Mode and 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

|             |                 |
|-------------|-----------------|
| 25-Mar-2018 | None            |
| 26-Mar-2018 | None            |
| 27-Mar-2018 | 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: 13

| Product  | Test Failed   |
|--|---|
| CS_OPER_SIR1SAR_0_20180326T113710_20180326T114231_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_0_20180326T145253_20180326T150029_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_0_20180326T182207_20180326T183220_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_0_20180326T052042_20180326T052327_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_0_20180326T195634_20180326T195744_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_0_20180326T000029_20180326T000651_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SIN_0_20180326T225644_20180326T225958_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SIN_0_20180326T195744_20180326T200205_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SIN_0_20180326T215901_20180326T220426_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SIN_0_20180326T164242_20180326T164339_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SIN_0_20180326T014137_20180326T014201_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR2SIN_0_20180326T014715_20180326T015840_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR2SIN_0_20180326T123238_20180326T123435_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_20180326T013233_20180326T013601_C001 | No Star Tracker file used in the processing of this product |
| CS_OFFL_SIR_FDM_1B_20180326T031204_20180326T031304_C001 | No Star Tracker file used in the processing of this product |
| CS_OFFL_SIR_FDM_1B_20180326T045136_20180326T045200_C001 | No Star Tracker file used in the processing of this product |
| CS_OFFL_SIR_FDM_1B_20180326T081509_20180326T081716_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: 6

| Product   | Test Failed                 | Description  |
|---|-----------------------------|--|
| CS_OFFL_SIR_FDM_1B_20180326T013233_20180326T013601_C001 | Attitude correction missing | The attitude has not been corrected  |
| CS_OFFL_SIR_FDM_1B_20180326T031204_20180326T031304_C001 | Attitude correction missing | The attitude has not been corrected  |
| CS_OFFL_SIR_FDM_1B_20180326T045136_20180326T045200_C001 | Attitude correction missing | The attitude has not been corrected  |
| CS_OFFL_SIR_FDM_1B_20180326T081509_20180326T081716_C001 | Attitude correction missing | The attitude has not been corrected  |
| CS_OFFL_SIR_FDM_1B_20180326T111739_20180326T112014_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_20180326T225540_20180326T225644_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 |

## 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: 39

| Product   | Test Failed                                      | Description  |
|---|--|--|
| CS_OFFL_SIR_FDM_2__20180326T002136_20180326T004905_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__20180326T010507_20180326T012811_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__20180326T024058_20180326T031000_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__20180326T031729_20180326T031928_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__20180326T033211_20180326T040713_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__20180326T041932_20180326T042249_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__20180326T042438_20180326T042600_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__20180326T045541_20180326T045821_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__20180326T051209_20180326T052041_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__20180326T052327_20180326T054631_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__20180326T061350_20180326T061958_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__20180326T062141_20180326T062624_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__20180326T065101_20180326T072429_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__20180326T074241_20180326T081318_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__20180326T084128_20180326T090349_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__20180326T093637_20180326T094807_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__20180326T101040_20180326T102622_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__20180326T105754_20180326T111736_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__20180326T111739_20180326T112014_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__20180326T115905_20180326T122217_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__20180326T133515_20180326T140135_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__20180326T141433_20180326T142625_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__20180326T143204_20180326T144908_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__20180326T151149_20180326T151927_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__20180326T153459_20180326T154131_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__20180326T155354_20180326T162758_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__20180326T164147_20180326T164242_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__20180326T170122_20180326T172100_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__20180326T173302_20180326T180743_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__20180326T191349_20180326T194322_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__20180326T202201_20180326T203520_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__20180326T205236_20180326T210821_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__20180326T211023_20180326T211944_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__20180326T212306_20180326T213006_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__20180326T214725_20180326T215901_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__20180326T221515_20180326T221624_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__20180326T223149_20180326T224723_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__20180326T232519_20180326T233230_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__20180326T233240_20180326T235808_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: 6

| Product   | Test Failed                 | Description  |
|---|-----------------------------|--|
| CS_OFFL_SIR_FDM_2__20180326T013233_20180326T013601_C001 | Attitude correction missing | The attitude has not been corrected                            |
| CS_OFFL_SIR_FDM_2__20180326T031204_20180326T031304_C001 | Attitude correction missing | The attitude has not been corrected                            |
| CS_OFFL_SIR_FDM_2__20180326T045136_20180326T045200_C001 | Attitude correction missing | The attitude has not been corrected                            |
| CS_OFFL_SIR_FDM_2__20180326T081509_20180326T081716_C001 | Attitude correction missing | The attitude has not been corrected                            |
| CS_OFFL_SIR_FDM_2__20180326T111739_20180326T112014_C001 | Echo error                  | The Echo Rx1 Error flag is set, indicating a degraded raw echo |





|   |                               |  |
|---|-------------------------------|--|
| CS_OFFL_SIR_FDM_2__20180326T202201_20180326T203520_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__20180326T205236_20180326T210821_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__20180326T211023_20180326T211944_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__20180326T214725_20180326T215901_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__20180326T223149_20180326T224723_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__20180326T233240_20180326T235808_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 | No. Products | No. QCC Reports | No. Valid | No. Warnings | No. Errors |
|--------------|--------------|-----------------|-----------|--------------|------------|
| SIR1LRM_0_   | 163          | 163             | 163       | 0            | 0          |
| SIR1SAR_0_   | 117          | 117             | 117       | 0            | 0          |
| SIR1SIN_0_   | 108          | 108             | 108       | 0            | 0          |
| SIR2SIN_0_   | 112          | 112             | 112       | 0            | 0          |
| SIR_FDM_1B   | 163          | 163             | 163       | 0            | 0          |
| SIR_FDM_2    | 161          | 161             | 161       | 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