

**1. Overview**

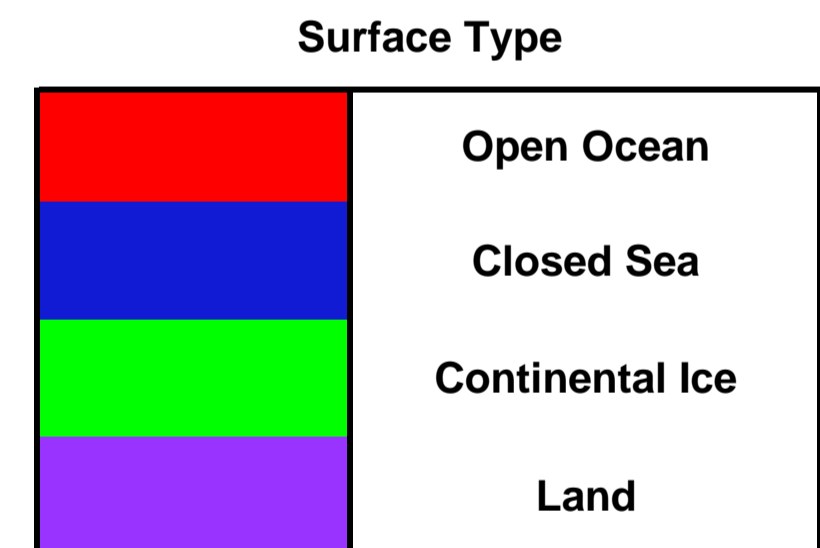
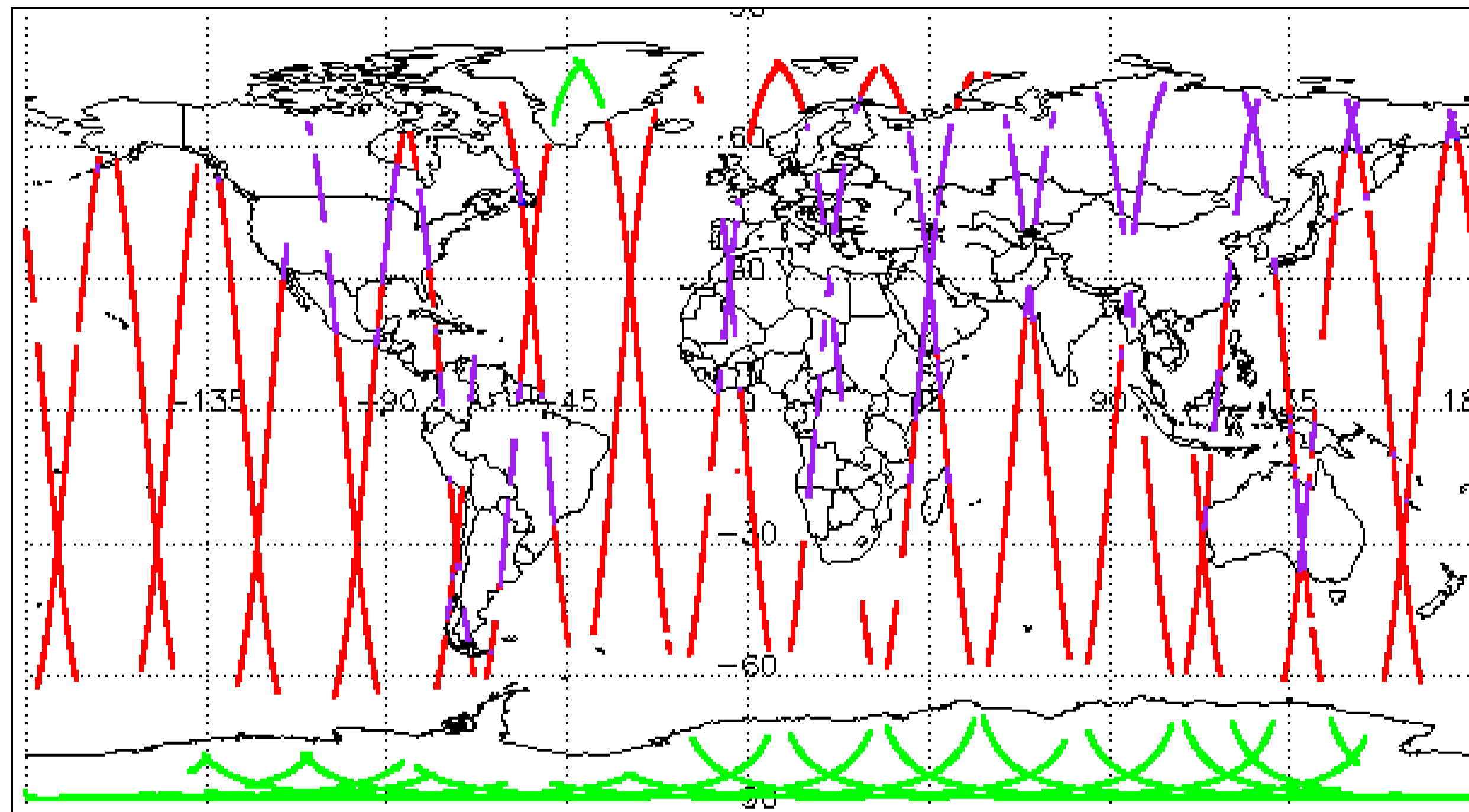
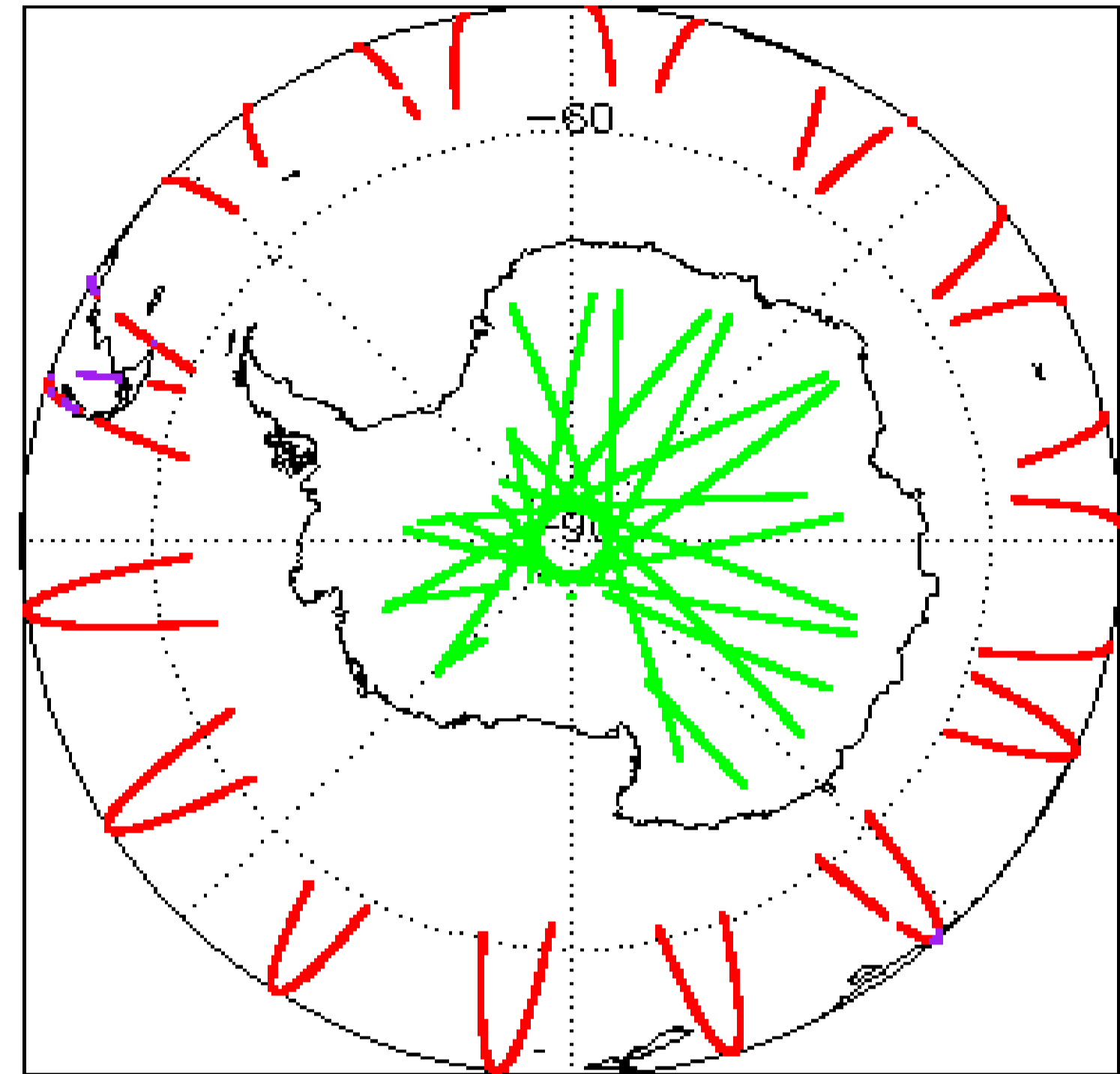
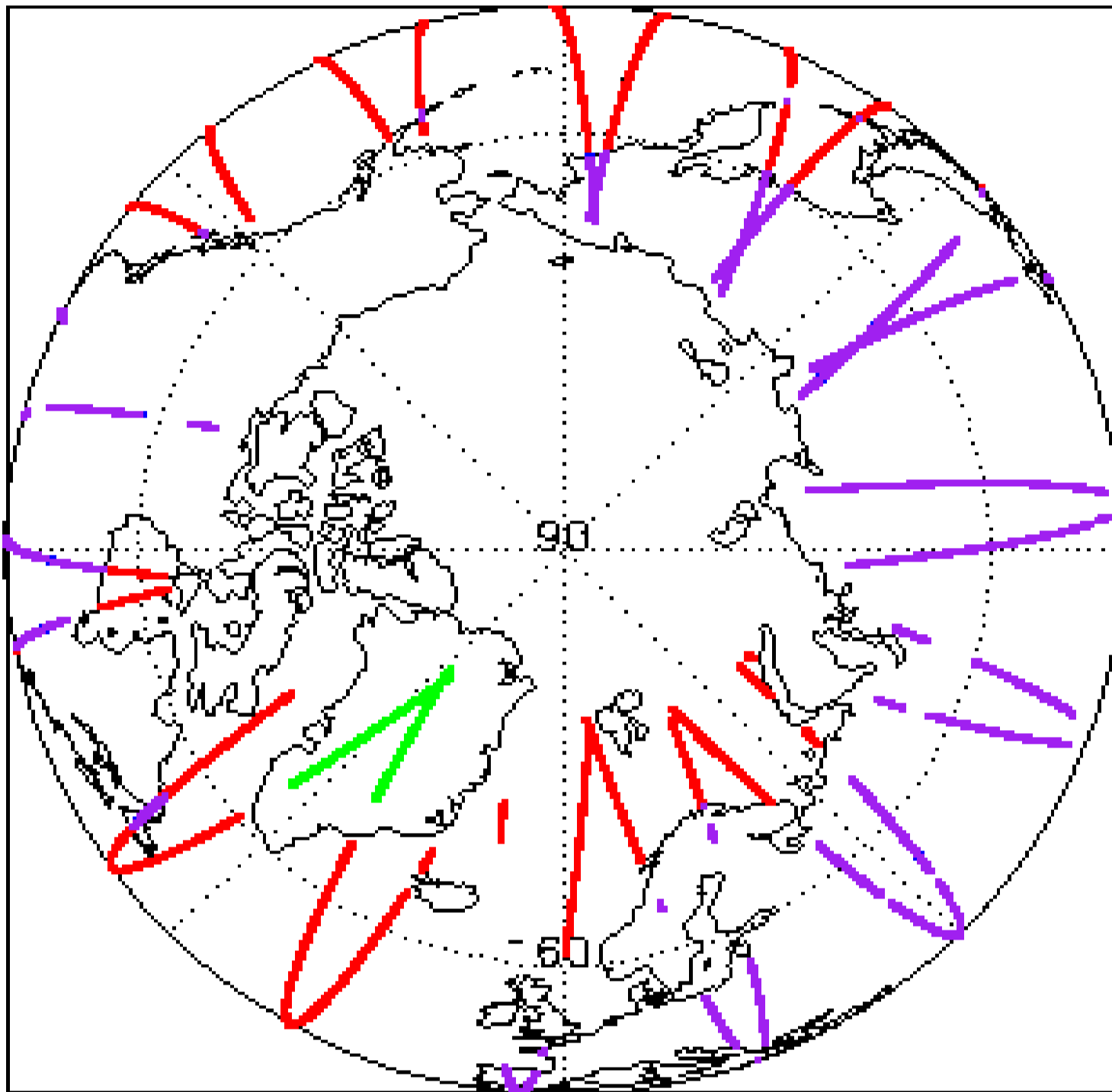
|                                |   |
|--------------------------------|---|
| <b>Report Production Date:</b> | 22-Oct-2020   |
| <b>Processor Used:</b>         | CryoSat Ice Processor                                 |
| <b>Data Used:</b>              | L1 and L2 Fast Delivery Marine (FDM) Mode and 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                   | Nominal                                |
| Star Tracker Usage Check                  | See Section 5.3                        |
| Calibration Usage Check                   | Nominal                                |
| Auxiliary Data File Usage Check           | See Section 5.5 and 6.3                |
| 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 |
| QCC Error/ Warning Check                  | See Section 7.1 and 7.2                |

**Mission / Instrument News**

|             |   |
|-------------|---|
| 16-Oct-2020 | AUX files delays from 2020-10-15 to 2020-10-16 midday |
| 17-Oct-2020 | None  |
| 18-Oct-2020 | 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:** 9

| Product   | Test Failed   |
|---|---|
| CS_OPER_SIR1LRM_0__20201017T080029_20201017T083548_0001.DBL | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_0__20201017T053816_20201017T054114_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_0__20201017T061212_20201017T062012_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_0__20201017T175108_20201017T175310_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SIN_0__20201017T034359_20201017T034546_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SIN_0__20201017T184013_20201017T184317_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SIN_0__20201017T201324_20201017T201631_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR2SIN_0__20201017T025918_20201017T031100_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR2SIN_0__20201017T120350_20201017T121044_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:** 7

| Product   | Test Failed  |
|---|--|
| CS_OFFL_SIR_FDM_1B_20201017T024319_20201017T024900_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20201017T055102_20201017T055602_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20201017T055746_20201017T055843_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20201017T060204_20201017T060325_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20201017T060338_20201017T060407_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20201017T060407_20201017T060503_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20201017T092759_20201017T093050_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |

### 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:** 5

| Product   | Test Failed   |
|---|---|
| CS_OFFL_SIR_FDM_1B_20201017T024319_20201017T024900_C001 | No Star Tracker file used in the processing of this product |
| CS_OFFL_SIR_FDM_1B_20201017T055102_20201017T055602_C001 | No Star Tracker file used in the processing of this product |
| CS_OFFL_SIR_FDM_1B_20201017T055746_20201017T055843_C001 | No Star Tracker file used in the processing of this product |
| CS_OFFL_SIR_FDM_1B_20201017T060204_20201017T060325_C001 | No Star Tracker file used in the processing of this product |
| CS_OFFL_SIR_FDM_1B_20201017T060338_20201017T060407_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_20201017T024319_20201017T024900_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_1B_20201017T055102_20201017T055602_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_1B_20201017T055746_20201017T055843_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_1B_20201017T060204_20201017T060325_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_1B_20201017T060338_20201017T060407_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: 9

| Product   | Test Failed  |
|---|--|
| CS_OFFL_SIR_FDM_2__20201017T024319_20201017T024900_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_2__20201017T041401_20201017T042133_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_2__20201017T055102_20201017T055602_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_2__20201017T055746_20201017T055843_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_2__20201017T060204_20201017T060325_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_2__20201017T060338_20201017T060407_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_2__20201017T060407_20201017T060503_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_2__20201017T092759_20201017T093050_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_2__20201017T094105_20201017T095341_C001.DBL | FOS Predicted Orbit (MPL_ORBPRES) used instead of the DORIS Navigator Orbit (DOR_NAV). |

### 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: 36

| Product   | Test Failed                                      | Description  |
|---|--|--|
| CS_OFFL_SIR_FDM_2__20201016T234316_20201017T000204_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__20201017T000742_20201017T001550_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__20201017T012452_20201017T013345_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__20201017T013752_20201017T020002_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__20201017T021628_20201017T023933_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__20201017T031251_20201017T033822_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__20201017T035516_20201017T041359_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__20201017T044513_20201017T051647_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__20201017T053435_20201017T053815_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__20201017T062404_20201017T063448_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__20201017T063547_20201017T065704_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__20201017T071442_20201017T073054_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__20201017T080029_20201017T083548_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__20201017T085503_20201017T092651_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__20201017T093909_20201017T094040_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__20201017T094105_20201017T095341_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__20201017T095823_20201017T100109_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__20201017T100225_20201017T101511_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__20201017T103325_20201017T104640_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__20201017T104855_20201017T110625_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__20201017T110630_20201017T110722_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__20201017T112820_20201017T113843_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__20201017T114023_20201017T115355_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__20201017T122832_20201017T123234_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__20201017T123357_20201017T124107_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__20201017T131246_20201017T133233_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__20201017T144827_20201017T151154_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__20201017T152810_20201017T160025_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__20201017T162444_20201017T164417_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_20201017T170904_20201017T174037_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_20201017T184730_20201017T190827_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_20201017T202636_20201017T205234_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_20201017T211417_20201017T211448_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_20201017T220957_20201017T223210_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_20201017T225540_20201017T231130_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_20201017T231749_20201017T232315_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_20201017T024319_20201017T024900_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_2_20201017T055102_20201017T055602_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_2_20201017T055746_20201017T055843_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_2_20201017T060204_20201017T060325_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_2_20201017T060338_20201017T060407_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:** 28

| Product  | Test Failed              | Description   |
|--|--------------------------|---|
| CS_OFFL_SIR_FDM_2_20201017T000742_20201017T001550_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_20201017T012452_20201017T013345_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_20201017T021628_20201017T023933_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_20201017T031251_20201017T033822_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_20201017T035516_20201017T041359_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_20201017T044513_20201017T051647_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_20201017T062404_20201017T063448_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_20201017T063547_20201017T065704_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_20201017T071442_20201017T073054_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_20201017T085503_20201017T092651_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_20201017T094105_20201017T095341_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_20201017T095823_20201017T100109_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_20201017T100225_20201017T101511_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_20201017T103325_20201017T104640_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_20201017T104855_20201017T110625_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_20201017T112820_20201017T113843_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_20201017T114023_20201017T115355_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_20201017T122832_20201017T123234_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_20201017T123357_20201017T124107_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_20201017T131246_20201017T133233_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_20201017T144827_20201017T151154_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_20201017T205652_20201017T210008_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_20201017T211523_20201017T212220_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_20201017T212238_20201017T214652_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_20201017T220957_20201017T223210_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_20201017T225540_20201017T231130_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_20201017T231749_20201017T232315_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_   | 169          | 169             | 168       | 1            | 0          |
| SIR1SAR_0_   | 105          | 105             | 104       | 1            | 0          |
| SIR1SIN_0_   | 104          | 104             | 104       | 0            | 0          |
| SIR2SIN_0_   | 111          | 111             | 111       | 0            | 0          |
| SIR_FDM_1B   | 169          | 169             | 5         | 0            | 164        |
| SIR_FDM_2    | 166          | 166             | 107       | 59           | 0          |

### 7.1 QCC Errors

Number of QCC reports with errors: 164

Total number of occurrences of each error

| Product Type | UVOB | - | - | - | - | - | - | - | - | - |
|--------------|------|---|---|---|---|---|---|---|---|---|
| SIR_FDM_1B   | 164  |   |   |   |   |   |   |   |   |   |

#### Test Description Key:

| Abbreviation | Test name           | Details  |
|--------------|---------------------|--|
| UVOB         | UnitVectorOrBlank_6 | The three array elements should form a unit vector (using a scale factor of 10 <sup>-6</sup> ) |

### 7.2 QCC Warnings

Number of QCC reports with warnings 190

Total number of occurrences of each warning

| Product Type | MVSIO | MVSIOFD | QF | RACOGO | RBSZO | RBSZOFD | RDTCO | REOTO | RSSBCO | RWTCO | RCMDSR |
|--------------|-------|---------|----|--------|-------|---------|-------|-------|--------|-------|--------|
| SIR1LRM_0_   | 0     | 0       | 1  | 0      | 0     | 0       | 0     | 0     | 0      | 0     | 0      |
| SIR1SAR_0_   | 0     | 0       | 1  | 0      | 0     | 0       | 0     | 0     | 0      | 0     | 0      |
| SIR_FDM_2_   | 35    | 46      | 0  | 1      | 43    | 49      | 1     | 4     | 7      | 1     | 1      |

#### Test Description Key:

| Abbreviation | Test name                           | Details   |
|--------------|-------------------------------------|---|
| MVSIO        | MissingValueShortIntOcean           | The value should not be a 'missing value' for surface type 0 only   |
| MVSIOFD      | MissingValueShortIntOceanFD2        | The value should not be a 'missing value' for surface type 0 only   |
| QF           | QualityFlag                         | The quality flag should be 0  |
| RACOGO       | RangeAltitudeCOGOcean               | The CoG altitude should be between 710000000mm and 760000000mm for surface type = ocean                       |
| RBSZO        | RangeBackscatterSigmaZeroOcean      | The backscatter sigma zero should be between 700 and 3000 (or missing) for surface type = ocean               |
| RBSZOFD      | RangeBackscatterSigmaZeroOceanFD2   | The backscatter sigma zero should be between 700 and 3000 (or missing) for surface type = ocean               |
| RDTCO        | RangeDryTroposphericCorrectionOcean | The Dry tropospheric correction should be between -2500mm and -1900mm (or missing) for surface type = ocean   |
| REOTO        | RangeEquilibriumOceanTideOcean      | The long period equilibrium ocean tide should be between -50mm and 50mm (or missing) for surface type = ocean |

### 7.3 Missing QCC Reports

Number of products with missing QCC reports: 0