

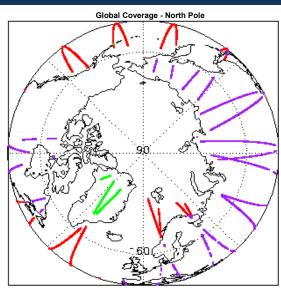
1. Overview

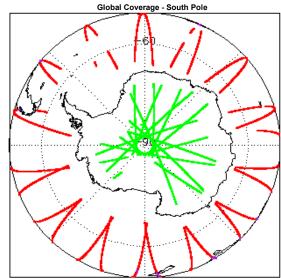
| Report Production Date: | 24-Mar-2020 |
|-------------------------|--------------------------------------------------------|
| Processor Used: | CryoSat Ice Processor |
| Data Used: | L1 and L2 Fast Delivery Marine (FDM) Mode and L0 Data |

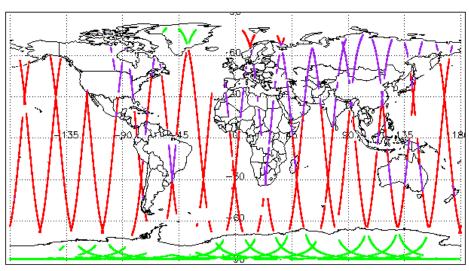
| Check | Status |
|-------------------------------------------|----------------------------------------|
| Server check: science-pds.cryosat.esa.int | Nominal |
| Server check: calval-pds.cryosat.esa.int | Nominal |
| Product Software Check | Nominal |
| Product Format Check | Nominal |
| Product Header Analysis | See Section 4.2, 5.2 and 6.2 |
| 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 |

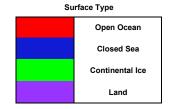
| Mission / Instrument News | | |
|---------------------------|-----------------|--|
| 22-Mar-2020 | None | |
| 23-Mar-2020 | None | |
| 24-Mar-2020 | Nothing planned | |

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).

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:

12

| Product | Test Failed |
|------------------------------------------------------------|-------------------------------------------------------------------------------------|
| CS_OPER_SIR1SAR_020200323T024404_20200323T024529_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_020200323T064113_20200323T064806_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_020200323T065409_20200323T070255_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_020200323T162610_20200323T162951_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_020200323T182018_20200323T182801_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SAR_020200323T212755_20200323T212942_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR1SIN_0_20200323T101147_20200323T101353_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR2SIN_020200323T100719_20200323T100824_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR2SIN_020200323T105017_20200323T105213_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR2SIN_020200323T215306_20200323T215546_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR2SIN_020200323T223930_20200323T224245_0001.HDR | Percentage of processing errors detected greater than minimum acceptable threshold. |
| CS_OPER_SIR2SIN_020200323T233307_20200323T233707_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:

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:

| Product | Test Failed |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------|
| CS_OFFL_SIR_FDM_1B_20200323T002717_20200323T004746_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T004837_20200323T005300_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T005549_20200323T005931_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T005938_20200323T005948_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T005954_20200323T010320_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T010545_20200323T013351_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T130920_20200323T131610_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T131610_20200323T131724_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T145038_20200323T145257_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T145257_20200323T145259_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T163111_20200323T163135_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T163136_20200323T163218_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T195511_20200323T195558_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_1B_20200323T195558_20200323T195816_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) 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:

| Product | Test Failed |
|---------------------------------------------------------|-------------------------------------------------------------|
| CS_OFFL_SIR_FDM_1B_20200323T130920_20200323T131610_C001 | No Star Tracker file used in the processing of this product |
| CS_OFFL_SIR_FDM_1B_20200323T145038_20200323T145257_C001 | No Star Tracker file used in the processing of this product |
| CS_OFFL_SIR_FDM_1B_20200323T163111_20200323T163135_C001 | No Star Tracker file used in the processing of this product |
| CS_OFFL_SIR_FDM_1B_20200323T195511_20200323T195558_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:

5.5 L1B FDM Auxilary 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:

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:

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:

| Product | Test Failed | Description |
|---------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------|
| CS_OFFL_SIR_FDM_1B_20200323T130920_20200323T131610_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_1B_20200323T142048_20200323T144908_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_20200323T145038_20200323T145257_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_1B_20200323T163111_20200323T163135_C001 | Attitude correction missing | The attitude has not been corrected |
| CS OFFI SIR FDM 1B 20200323T105511 20200323T105558 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:

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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:

17

| Product | Test Failed |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------|
| CS_OFFL_SIR_FDM_220200323T002717_20200323T004746_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T004837_20200323T005300_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T005549_20200323T005931_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T005938_20200323T005948_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T005954_20200323T010320_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T010545_20200323T013351_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T080001_20200323T080140_C001.DBL | Product filename start/stop differs slightly from start/stop validity due to rounding. |
| CS_OFFL_SIR_FDM_220200323T113232_20200323T113301_C001.DBL | Product filename start/stop differs slightly from start/stop validity due to rounding. |
| CS_OFFL_SIR_FDM_220200323T130920_20200323T131610_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T131610_20200323T131724_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T145038_20200323T145257_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T145257_20200323T145259_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T163111_20200323T163135_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T163136_20200323T163218_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T195511_20200323T195558_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T195558_20200323T195816_C001.DBL | FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV). |
| CS_OFFL_SIR_FDM_220200323T233020_20200323T233040_C001.DBL | Product filename start/stop differs slightly from start/stop validity due to rounding. |

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:

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_220200323T002717_20200323T004746_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_220200323T020557_20200323T023227_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_220200323T024529_20200323T032026_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_220200323T040858_20200323T041206_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_20200323T045006_20200323T045846_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_220200323T060326_20200323T063718_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_220200323T070256_20200323T072549_C001 | Sea State Bias Correction | There is an error with the Sea State Bias Correction for one or more records |
| CS_OFFL_SIR_FDM_220200323T075618_20200323T075942_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_20200323T080001_20200323T080140_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_220200323T080622_20200323T081435_C001 | Sea State Bias Correction, Mean Sea Surface height, Altimetric Wind Speed | There is an error with the Altimetric Wind Speed, the Sea State Bias Correction and the Mean Sea Surface Height for one or more records |
| CS_OFFL_SIR_FDM_220200323T081946_20200323T081948_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_220200323T083411_20200323T085022_C001 | Sea State Bias Correction | There is an error with the Sea State Bias Correction for one or more records |

| | Sea State Bias Correction, Altimetric | There is an error with the Altimetric Wind Speed and Sea State Bias |
|--------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| CS_OFFL_SIR_FDM_220200323T085235_20200323T090709_C001 | Wind Speed | Correction for one or more records |
| CS_OFFL_SIR_FDM_220200323T092306_20200323T093543_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_220200323T093611_20200323T093844_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_220200323T094105_20200323T095007_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_220200323T101824_20200323T102756_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_220200323T103446_20200323T104950_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_20200323T110229_20200323T111930_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_220200323T115138_20200323T115145_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_220200323T120131_20200323T122840_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_220200323T124138_20200323T130714_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_220200323T133913_20200323T140725_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_220200323T142048_20200323T144908_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_220200323T151219_20200323T154659_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_220200323T163602_20200323T163922_C001 | Sea State Bias Correction | There is an error with the Sea State Bias Correction for one or more records |
| CS_OFFL_SIR_FDM_220200323T170311_20200323T172617_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_220200323T173816_20200323T175233_C001 | Sea State Bias Correction | There is an error with the Sea State Bias Correction for one or more records |
| CS_OFFL_SIR_FDM_220200323T175333_20200323T175816_C001 | Sea State Bias Correction | There is an error with the Sea State Bias Correction for one or more records |
| CS_OFFL_SIR_FDM_220200323T192225_20200323T195346_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_220200323T200749_20200323T200750_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_220200323T201350_20200323T202105_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_220200323T202546_20200323T202640_C001 | Sea State Bias Correction | There is an error with the Sea State Bias Correction for one or more records |
| CS_OFFL_SIR_FDM_220200323T202644_20200323T204331_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_220200323T215546_20200323T220605_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_220200323T220745_20200323T222238_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_220200323T224245_20200323T225119_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_220200323T225509_20200323T225957_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_220200323T233844_20200324T000149_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:

| Product | Test Failed | Description |
|-------------------------------------------------------|-----------------------------|----------------------------------------------------------------|
| CS_OFFL_SIR_FDM_220200323T130920_20200323T131610_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_220200323T142048_20200323T144908_C001 | Echo error | The Echo Rx1 Error flag is set, indicating a degraded raw echo |
| CS_OFFL_SIR_FDM_220200323T145038_20200323T145257_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_220200323T163111_20200323T163135_C001 | Attitude correction missing | The attitude has not been corrected |
| CS_OFFL_SIR_FDM_220200323T195511_20200323T195558_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:

| Product | Test Failed | Description |
|-------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CS_OFFL_SIR_FDM_220200323T002717_20200323T004746_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_220200323T020557_20200323T023227_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_220200323T060326_20200323T063718_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_220200323T075618_20200323T075942_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_220200323T080622_20200323T081435_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_220200323T085235_20200323T090709_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_220200323T093611_20200323T093844_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_220200323T094105_20200323T095007_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_220200323T101824_20200323T102756_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_220200323T115138_20200323T115145_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_220200323T120131_20200323T122840_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_220200323T124138_20200323T130714_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_220200323T133913_20200323T140725_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_220200323T142048_20200323T144908_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_220200323T151219_20200323T154659_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_220200323T170311_20200323T172617_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_220200323T201350_20200323T202105_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_220200323T202644_20200323T204331_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_220200323T215546_20200323T220605_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_220200323T224245_20200323T225119_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_220200323T225509_20200323T225957_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. |

6.7 L2 FDM SWH and Backscatter Measurement Check

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CryoSat L2 data includes a SWH-Squared Averaging Status flag (field 39) and an CFI (field 45) and OCOG (field 51) Backscatter Averaging Status flag for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

| Product | Test Failed | Description |
|--------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CS_OFFL_SIR_FDM_2_20200323T002717_20200323T004746_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T020557_20200323T023227_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T060326_20200323T063718_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T075618_20200323T075942_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T080622_20200323T081435_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T085235_20200323T090709_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T093611_20200323T093844_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T094105_20200323T095007_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T101824_20200323T102756_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T115138_20200323T115145_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T120131_20200323T122840_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T124138_20200323T130714_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T133913_20200323T140725_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T142048_20200323T144908_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T151219_20200323T154659_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T170311_20200323T172617_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T201350_20200323T202105_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CS_OFFL_SIR_FDM_220200323T202644_20200323T204331_C001 | CFI Backscatter Status Flag, SWH Squared Averaging Status Flag | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |

| CFI Backscatter Status Flag, SWH | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |
| CFI Backscatter Status Flag, SWH | The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records. |

6.8 L2 FDM Ocean Retracking Quality Check

CryoSat L2 data includes an ocean retracking quality flag (field 66) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

Product Test Failed Description The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T002717 20200323T004746 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more record The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T010545 20200323T013351 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T020557_20200323T023227_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T024529_20200323T032026_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T033329_20200323T033445_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T042419 20200323T044806 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T045006_20200323T045846_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T051205_20200323T051435_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T060326_20200323T063718_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T070256_20200323T072549_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T074358 20200323T075615 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T075618_20200323T075942_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T080001 20200323T080140 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T080622_20200323T081435_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T085235 20200323T090709 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T092306 20200323T093543 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T093611 20200323T093844 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T094105_20200323T095007_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T101824 20200323T102756 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean ${\tt CS_OFFL_SIR_FDM_2_20200323T103446_20200323T104950_C001}$ Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T115138 20200323T115145 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T120131 20200323T122840 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T124138_20200323T130714_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T133913 20200323T140725 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T142048_20200323T144908_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T151219_20200323T154659_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T165159 20200323T170026 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T170311_20200323T172617_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T173816_20200323T175233_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T175333_20200323T175816_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T183046_20200323T190413_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T192225_20200323T195346_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T201350 20200323T202105 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T202546_20200323T202640_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T202644 20200323T204331 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T210027_20200323T211405_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T212943 20200323T213015 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T215546 20200323T220605 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20200323T224245 20200323T225119 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T225509_20200323T225957_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS_OFFL_SIR_FDM_2__20200323T233844_20200324T000149_C001 Ocean Retracking Quality Flag 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_ | 179 | 179 | 179 | 0 | 0 |
| SIR1SAR_0_ | 127 | 127 | 127 | 0 | 0 |
| SIR1SIN_0_ | 98 | 98 | 98 | 0 | 0 |
| SIR2SIN_0_ | 103 | 103 | 103 | 0 | 0 |
| SIR_FDM_1B | 179 | 179 | 4 | 0 | 175 |
| SIR FDM 2 | 175 | 175 | 120 | 55 | 0 |

7.1 QCC Errors

Number of QCC reports with errors:

7.2 QCC Warnings

Number of QCC reports with warnings

57

7.3 Missing QCC Reports

Number of products with missing QCC reports:

0