

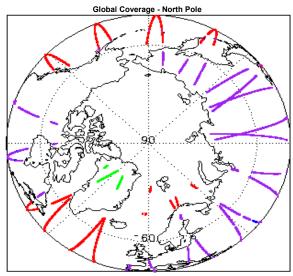
## 1. Overview

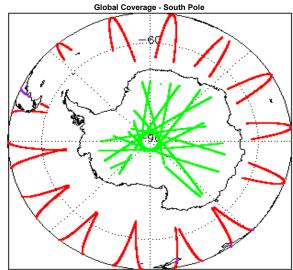
Report Production Date:	03-Feb-2020	
Processor Used:	CryoSat Ice Processor	
Data Used:	L1 and L2 Fast Delivery Marine (FDM Mode and L0 Data	

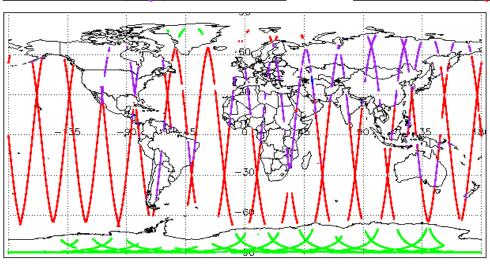
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	See Section 4.2, 5.2 and 6.2
Star Tracker Usage Check	See Section 5.3
Calibration Usage Check	Nominal
Auxiliary Data File Usage Check	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

Mission / Instru	Mission / Instrument News		
31-Jan-2020	None		
01-Feb-2020	None		
02-Feb-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:

Product	Test Failed
CS_OPER_SIR1SAR_020200201T065410_20200201T070103_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200201T065056_20200201T065410_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200201T174034_20200201T174420_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200201T224452_20200201T224635_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200201T010528_20200201T010715_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS OPER SIR2SIN 0 20200201T122536 20200201T122608 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_20200201T150922_20200201T150942_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200201T182325_20200201T182504_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200201T182151_20200201T182325_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200201T213839_20200201T214539_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200201T214539_20200201T214605_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200201T150904_20200201T150922_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200201T164532_20200201T164759_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200201T164514_20200201T164532_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_20200201T150904_20200201T150922_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200201T164514_20200201T164532_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200201T182151_20200201T182325_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200201T213839_20200201T214539_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 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_20200201T150904_20200201T150922_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200201T164514_20200201T164532_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200201T182151_20200201T182325_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200201T213839_20200201T214539_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).

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:

Product	Test Failed
CS_OFFL_SIR_FDM_220200201T150922_20200201T150942_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200201T182325_20200201T182504_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200201T182151_20200201T182325_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200201T213839_20200201T214539_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200201T214539_20200201T214605_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200201T150904_20200201T150922_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200201T164532_20200201T164759_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200201T164514_20200201T164532_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) 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:

44

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200201T003831_20200201T004848_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_220200201T005028_20200201T010500_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_220200201T012419_20200201T013518_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_220200201T013651_20200201T014236_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_220200201T015508_20200201T015531_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_220200201T025746_20200201T032632_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_220200201T035753_20200201T042358_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_220200201T053420_20200201T054523_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_220200201T054527_20200201T055207_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_220200201T061712_20200201T065011_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_220200201T070411_20200201T070501_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_220200201T081918_20200201T083019_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200201T084423_20200201T084431_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_220200201T090013_20200201T092012_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200201T093613_20200201T100728_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_220200201T102503_20200201T104356_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200201T104427_20200201T105731_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_220200201T111502_20200201T113044_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_220200201T113246_20200201T114207_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_220200201T120430_20200201T120655_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_220200201T125436_20200201T130913_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_220200201T143353_20200201T145930_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_220200201T153314_20200201T155839_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_220200201T161241_20200201T164020_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_220200201T165029_20200201T165100_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_220200201T170538_20200201T173752_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_220200201T184315_20200201T191740_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_220200201T193033_20200201T194958_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_220200201T202201_20200201T205034_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_220200201T205046_20200201T205557_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_220200201T210938_20200201T211052_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_220200201T211104_20200201T213709_C001	Sea State Bias Correction, Mean Sea Surface height	There is an error with the Sea State Bias Correction and the Mean Sea Surface Height for one or more records
CS_OFFL_SIR_FDM_220200201T213839_20200201T214539_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200201T214539_20200201T214605_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_220200201T220257_20200201T220425_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_220200201T221739_20200201T222005_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_220200201T222008_20200201T222811_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_220200201T230734_20200201T231624_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_220200201T233743_20200201T233745_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_220200201T234657_20200201T235657_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_220200201T235900_20200202T000616_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:

 Product
 Test Failed
 Description

 CS\_OFFL\_SIR\_FDM\_2\_20200201T150904\_20200201T150922\_C001
 Attitude correction missing
 The attitude has not been corrected

 CS\_OFFL\_SIR\_FDM\_2\_20200201T164514\_20200201T164532\_C001
 Attitude correction missing
 The attitude has not been corrected

 CS\_OFFL\_SIR\_FDM\_2\_20200201T182151\_20200201T182325\_C001
 Attitude correction missing
 The attitude has not been corrected

The attitude has not been corrected

Attitude correction missing

#### 6.6 L2 FDM Range Measurement Check

CS\_OFFL\_SIR\_FDM\_2\_\_20200201T213839\_20200201T214539\_C001

24

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:

Test Failed Product Description The master fail flag is set by the CFI call, for one or more records CS\_OFFL\_SIR\_FDM\_2\_\_20200201T003831\_20200201T004848\_C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records. The master fail flag is set by the CFI call, for one or more records CS\_OFFL\_SIR\_FDM\_2\_\_20200201T012419\_20200201T013518\_C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 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 #13, #14, #15 and #16 should be CS\_OFFL\_SIR\_FDM\_2\_\_20200201T015508\_20200201T015531\_C001 CFI Retracked Range Flag ignored for these records The master fail flag is set by the CFI call, for one or more records CS\_OFFL\_SIR\_FDM\_2\_\_20200201T025746\_20200201T032632\_C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records. The master fail flag is set by the CFI call, for one or more records, CS OFFL SIR FDM 2 20200201T035753 20200201T042358 C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records The master fail flag is set by the CFI call, for one or more records CS OFFL SIR FDM 2 20200201T053420 20200201T054523 C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records. The master fail flag is set by the CFI call, for one or more records CS OFFL SIR FDM 2 20200201T054527 20200201T055207 C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records. The master fail flag is set by the CFI call, for one or more records CS\_OFFL\_SIR\_FDM\_2\_\_20200201T061712\_20200201T065011\_C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records. The master fail flag is set by the CFI call, for one or more records CS\_OFFL\_SIR\_FDM\_2\_\_20200201T093613\_20200201T100728\_C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records. The master fail flag is set by the CFI call, for one or more records CS\_OFFL\_SIR\_FDM\_2\_\_20200201T104427\_20200201T105731\_C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records. The master fail flag is set by the CFI call, for one or more records CS\_OFFL\_SIR\_FDM\_2\_\_20200201T111502\_20200201T113044\_C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 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 #13, #14, #15 and #16 should be CS\_OFFL\_SIR\_FDM\_2\_\_20200201T113246\_20200201T114207\_C001 CFI Retracked Range Flag 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 #13, #14, #15 and #16 should be CS OFFL SIR FDM 2 20200201T143353 20200201T145930 C001 CFI Retracked Range Flag ignored for these records The master fail flag is set by the CFI call, for one or more records CS OFFL SIR FDM 2 20200201T153314 20200201T155839 C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ianored for these records The master fail flag is set by the CFI call, for one or more records CS\_OFFL\_SIR\_FDM\_2\_\_20200201T161241\_20200201T164020\_C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records The master fail flag is set by the CFI call, for one or more records,  ${\tt CS\_OFFL\_SIR\_FDM\_2\_20200201T170538\_20200201T173752\_C001}$ CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records. The master fail flag is set by the CFI call, for one or more records CS\_OFFL\_SIR\_FDM\_2\_\_20200201T184315\_20200201T191740\_C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records The master fail flag is set by the CFI call, for one or more records. CS\_OFFL\_SIR\_FDM\_2\_\_20200201T193033\_20200201T194958\_C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records. The master fail flag is set by the CFI call, for one or more records CS\_OFFL\_SIR\_FDM\_2\_\_20200201T202201\_20200201T205034\_C001 indicating the values stored in fields #13, #14, #15 and #16 should be CFI Retracked Range Flag 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 #13, #14, #15 and #16 should be CS\_OFFL\_SIR\_FDM\_2\_\_20200201T205046\_20200201T205557\_C001 CFI Retracked Range Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records CS OFFL SIR FDM 2 20200201T221739 20200201T222005 C001 CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records. The master fail flag is set by the CFI call, for one or more records CFI Retracked Range Flag indicating the values stored in fields #13, #14, #15 and #16 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 #13, #14, #15 and #16 should be ignored for these records. CFI Retracked Range Flag The master fail flag is set by the CFI call, for one or more records CS OFFL SIR FDM 2 20200201T235900 20200202T000616 C001 CFI Retracked Range Flag 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

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:

**Test Failed** Description Product The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T003831\_20200201T004848\_C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag. SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T012419\_20200201T013518\_C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T015508\_20200201T015531\_C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T025746\_20200201T032632\_C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag 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 CFI Backscatter Status Flag, SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T035753\_20200201T042358\_C001 Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records, CFI Backscatter Status Flag, SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T053420\_20200201T054523\_C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ianored for these records The master fail flag is set by the CFI call, for one or more records, CFI Backscatter Status Flag, SWH indicating the values stored in fields #41, #42, #43 and #44 should be CS\_OFFL\_SIR\_FDM\_2\_\_20200201T054527\_20200201T055207\_C001 Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records, CFI Backscatter Status Flag, SWH CS OFFL SIR FDM 2 20200201T061712 20200201T065011 C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH CS OFFL SIR FDM 2 20200201T093613 20200201T100728 C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH CS OFFL SIR FDM 2 20200201T104427 20200201T105731 C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH CS OFFL SIR FDM 2 20200201T111502 20200201T113044 C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T113246\_20200201T114207\_C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH Squared Averaging Status Flag CS\_OFFL\_SIR\_FDM\_2\_\_20200201T143353\_20200201T145930\_C001 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, CFI Backscatter Status Flag. SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T153314\_20200201T155839\_C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH Squared Averaging Status Flag CS\_OFFL\_SIR\_FDM\_2\_\_20200201T161241\_20200201T164020\_C001 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, CFI Backscatter Status Flag, SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T170538\_20200201T173752\_C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T184315\_20200201T191740\_C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records The master fail flag is set by the CFI call, for one or more records. CFI Backscatter Status Flag, SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T193033\_20200201T194958\_C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag 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 CFI Backscatter Status Flag, SWH CS\_OFFL\_SIR\_FDM\_2\_\_20200201T202201\_20200201T205034\_C001 Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records, CFI Backscatter Status Flag, SWH CS OFFL SIR FDM 2 20200201T205046 20200201T205557 C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH CS OFFL SIR FDM 2 20200201T221739 20200201T222005 C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH CS OFFL SIR FDM 2 20200201T222008 20200201T222811 C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records. The master fail flag is set by the CFI call, for one or more records CFI Backscatter Status Flag, SWH CS OFFL SIR FDM 2 20200201T234657 20200201T235657 C001 indicating the values stored in fields #41, #42, #43 and #44 should be Squared Averaging Status Flag ignored for these records.

#### 6.8 L2 FDM Ocean Retracking Quality Check

CS\_OFFL\_SIR\_FDM\_2\_\_20200201T235900\_20200202T000616\_C001

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
CS_OFFL_SIR_FDM_220200131T235859_20200201T001028_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_220200201T003831_20200201T004848_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_220200201T005028_20200201T010500_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_220200201T012419_20200201T013518_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_220200201T013651_20200201T014236_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_220200201T014520_20200201T015217_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_220200201T015508_20200201T015531_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_220200201T025746_20200201T032632_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_220200201T035753_20200201T042358_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.

CFI Backscatter Status Flag, SWH

Squared Averaging Status Flag

The master fail flag is set by the CFI call, for one or more records

ignored for these records.

indicating the values stored in fields #41, #42, #43 and #44 should be

CS_OFFL_SIR_FDM_2_20200201T053420_20200201T054523_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_220200201T054527_20200201T055207_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_220200201T061712_20200201T065011_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_220200201T072225_20200201T074243_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_220200201T081918_20200201T083019_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_220200201T085445_20200201T085928_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_220200201T090013_20200201T092012_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_220200201T093613_20200201T100728_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_220200201T104427_20200201T105731_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_220200201T111502_20200201T113044_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_220200201T113246_20200201T114207_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_220200201T120921_20200201T122127_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_220200201T134743_20200201T135332_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_220200201T135617_20200201T135716_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_220200201T143353_20200201T145930_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_220200201T153314_20200201T155839_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_220200201T161241_20200201T164020_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_220200201T170538_20200201T173752_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_220200201T182903_20200201T182955_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_220200201T184315_20200201T191740_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_220200201T193033_20200201T194958_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_220200201T202201_20200201T205034_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_220200201T205046_20200201T205557_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_220200201T211104_20200201T213709_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_220200201T220257_20200201T220425_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_220200201T221739_20200201T222005_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_220200201T2222008_20200201T222811_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_220200201T225332_20200201T230411_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_220200201T234657_20200201T235657_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_220200201T235900_20200202T000616_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_	172	172	172	0	0
SIR1SAR_0_	115	115	115	0	0
SIR1SIN_0_	103	103	103	0	0
SIR2SIN_0_	108	108	108	0	0
SIR_FDM_1B	172	172	4	0	168
SIR_FDM_2	172	172	112	60	0

### 7.1 QCC Errors

Number of QCC reports with errors:

168

## 7.2 QCC Warnings

Number of QCC reports with warnings

62

# 7.3 Missing QCC Reports

Number of products with missing QCC reports:

0