

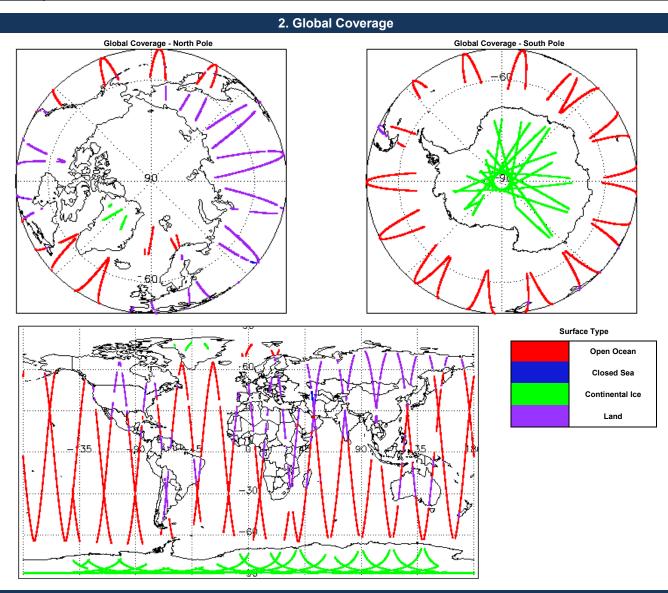
# **QA4EO Daily Report for FDM data:**

# 25/05/2020

1. Overview			
		Check	Status
Report Production Date:	26-May-2020	Server check: science-pds.cryosat.esa.int	Nominal
		Server check: calval-pds.cryosat.esa.int	Nominal
Processor Used:	CryoSat Ice Processor	Product Software Check	Nominal
	L1 and L2 Fast Delivery Marine (FDM) Mode and L0 Data	Product Format Check	Nominal
Data Used:		Product Header Analysis	See Section 4.2, 5.2 and 6.2
	<b></b>	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 24-May-2020 None 25-May-2020 None

26-May-2020 Nothing planned



# 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).

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.

10

Number of products with errors:

Product	Test Failed
CS_OPER_SIR1SAR_020200525T025305_20200525T025350_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0_20200525T034223_20200525T034627_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_020200525T093617_20200525T094033_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_020200525T195231_20200525T200007_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_020200525T223559_20200525T223754_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0_20200525T224700_20200525T225558_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200525T174717_20200525T175111_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_020200525T120303_20200525T120649_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_020200525T184544_20200525T185157_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_020200525T194946_20200525T195124_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:
 8

Product	Test Failed
CS_OFFL_SIR_FDM_1B_20200525T093134_20200525T093149_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200525T093150_20200525T093211_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200525T110745_20200525T110800_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200525T110801_20200525T111030_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200525T124506_20200525T124553_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200525T124554_20200525T124729_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200525T160109_20200525T160810_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200525T160811_20200525T160835_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.

4

Number of products with errors:

Product	Test Failed
CS_OFFL_SIR_FDM_1B_20200525T093134_20200525T093149_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200525T110745_20200525T110800_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200525T124506_20200525T124553_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200525T160109_20200525T160810_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

0

7

# 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_20200525T063125_20200525T064358_C001		The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_FDM_1B_20200525T064838_20200525T064947_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_20200525T093134_20200525T093149_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200525T094719_20200525T095112_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_20200525T110745_20200525T110800_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200525T124506_20200525T124553_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200525T160109_20200525T160810_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: 13

Product	Test Failed
CS_OFFL_SIR_FDM_220200525T093134_20200525T093149_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200525T093150_20200525T093211_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200525T095444_20200525T095459_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200525T110745_20200525T110800_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200525T110801_20200525T111030_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200525T124506_20200525T124553_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200525T124554_20200525T124729_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200525T160109_20200525T160810_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200525T160811_20200525T160835_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200525T190136_20200525T190138_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200525T202956_20200525T205241_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200525T205252_20200525T205631_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200525T230713_20200525T230717_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.

0

38

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200525T000128_20200525T001438_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_220200525T003954_20200525T011323_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_220200525T014453_20200525T020439_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_220200525T021901_20200525T024052_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200525T024115_20200525T025305_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_220200525T035851_20200525T043115_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_220200525T044733_20200525T050624_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_220200525T050822_20200525T052003_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_220200525T053748_20200525T055312_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_220200525T055515_20200525T060436_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_220200525T062658_20200525T062921_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_220200525T071728_20200525T073141_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_220200525T081848_20200525T081953_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_220200525T081955_20200525T084226_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_220200525T085702_20200525T092201_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_220200525T095532_20200525T102113_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_220200525T103551_20200525T110050_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_220200525T121415_20200525T122012_C001	Mean Sea Surface height	There is an error with the Mean Sea Surface Height for one or more records
CS_OFFL_SIR_FDM_220200525T144451_20200525T151306_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_220200525T151317_20200525T151808_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_220200525T153357_20200525T155938_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_220200525T160811_20200525T160835_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_220200525T164009_20200525T164229_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200525T165123_20200525T165734_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_220200525T173006_20200525T173853_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_220200525T174020_20200525T174708_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_220200525T180942_20200525T181928_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_220200525T182130_20200525T182842_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_220200525T183003_20200525T183622_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_220200525T190951_20200525T191830_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_220200525T191935_20200525T192249_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_220200525T200007_20200525T201530_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_220200525T202956_20200525T205241_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_220200525T205252_20200525T205631_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_220200525T212929_20200525T215447_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_220200525T223948_20200525T224033_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_220200525T230722_20200525T231252_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_220200525T231255_20200525T233456_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:
7

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200525T063125_20200525T064358_C001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_220200525T064838_20200525T064947_C001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_220200525T093134_20200525T093149_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220200525T094719_20200525T095112_C001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_220200525T110745_20200525T110800_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220200525T124506_20200525T124553_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220200525T160109_20200525T160810_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: 22

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200525T000128_20200525T001438_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_20200525T003954_20200525T011323_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_220200525T014453_20200525T020439_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_220200525T035851_20200525T043115_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_20200525T050822_20200525T052003_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_20200525T053748_20200525T055312_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_220200525T081848_20200525T081953_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_20200525T085702_20200525T092201_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_220200525T095532_20200525T102113_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_20200525T103551_20200525T110050_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_220200525T144451_20200525T151306_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_220200525T151317_20200525T151808_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_220200525T180942_20200525T181928_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_220200525T182130_20200525T182842_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_220200525T190951_20200525T191830_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_220200525T191935_20200525T192249_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_220200525T202956_20200525T205241_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_220200525T205252_20200525T205631_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_220200525T212929_20200525T215447_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_220200525T223948_20200525T224033_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_220200525T230722_20200525T231252_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_220200525T231255_20200525T233456_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

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: 22		
Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200525T000128_20200525T001438_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_220200525T003954_20200525T011323_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_220200525T014453_20200525T020439_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_220200525T035851_20200525T043115_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_220200525T050822_20200525T052003_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_220200525T053748_20200525T055312_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_220200525T081848_20200525T081953_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_220200525T085702_20200525T092201_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_220200525T095532_20200525T102113_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_220200525T103551_20200525T110050_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_220200525T144451_20200525T151306_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_220200525T151317_20200525T151808_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_220200525T180942_20200525T181928_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_220200525T182130_20200525T182842_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_220200525T190951_20200525T191830_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_220200525T191935_20200525T192249_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_220200525T202956_20200525T205241_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_220200525T205252_20200525T205631_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_220200525T212929_20200525T215447_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_220200525T223948_20200525T224033_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_220200525T230722_20200525T231252_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_220200525T231255_20200525T233456_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.

## 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.

40

Test Failed

Product CS\_OFFL\_SIR\_FDM\_2\_\_20200525T000128\_20200525T001438\_C001 CS OFFL SIR FDM 2 20200525T003954 20200525T011323 C001 CS OFFL SIR FDM 2 20200525T014453 20200525T020439 C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T021901\_20200525T024052\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T024115\_20200525T025305\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T032241\_20200525T034223\_C001 CS OFFL SIR FDM 2 20200525T035851 20200525T043115 C001 CS OFFL SIR FDM 2 20200525T044733 20200525T050624 C001 CS OFFL SIR FDM 2 20200525T050822 20200525T052003 C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T053748\_20200525T055312\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T055515\_20200525T060436\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T063125\_20200525T064358\_C001 CS OFFL SIR FDM 2 20200525T081417 20200525T081603 C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T081848\_20200525T081953\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T081955\_20200525T084226\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T085702\_20200525T092201\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T093150\_20200525T093211\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T095532\_20200525T102113\_C001 CS OFFL SIR FDM 2 20200525T103551 20200525T110050 C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T112807\_20200525T120009\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T130547\_20200525T133924\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T144451\_20200525T151306\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T151317\_20200525T151808\_C001 CS OFFL SIR FDM 2 20200525T162423 20200525T162649 C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T162741\_20200525T163603\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T164009\_20200525T164229\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T164240\_20200525T164936\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T171601\_20200525T172824\_C001 CS OFFL SIR FDM 2 20200525T173006 20200525T173853 C001 CS OFFL SIR FDM 2 20200525T180942 20200525T181928 C001 CS OFFL SIR FDM 2 20200525T182130 20200525T182842 C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T190951\_20200525T191830\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T191935\_20200525T192249\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T200007\_20200525T201530\_C001 CS OFFL SIR FDM 2 20200525T202956 20200525T205241 C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T205252\_20200525T205631\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T212929\_20200525T215447\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T223948\_20200525T224033\_C001 CS\_OFFL\_SIR\_FDM\_2\_\_20200525T230722\_20200525T231252\_C001 CS OFFL SIR FDM 2 20200525T231255 20200525T233456 C001

Ocean Retracking Quality Flag Ocean Retracking Quality Flag

Description The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records. 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The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records. 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_	175	175	175	0	0
SIR1SAR_0_	112	112	112	0	0
SIR1SIN_0_	107	107	107	0	0
SIR2SIN_0_	111	111	111	0	0
SIR_FDM_1B	175	175	4	0	171
SIR_FDM_2	174	174	121	53	0

7.1 QCC Errors		
Number of QCC reports with errors:	171	
7.2 QCC Warnings		
Number of QCC reports with warnings	55	
7.3 Missing QCC Reports		
Number of products with missing QCC reports:	0	