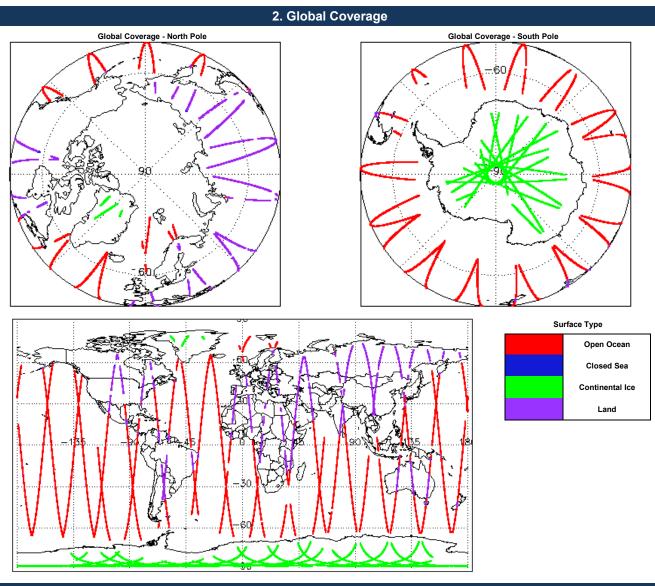


QA4EO Daily Report for FDM data:

<u>20/04/2020</u>

1. Overview			
Demonst Devolution Defer	04 Aug 2020	Check	Status
Report Production Date:	21-Apr-2020	Server check: science-pds.cryosat.esa.int	Nominal
Processor Used:	CryoSat Ice Processor	Server check: calval-pds.cryosat.esa.int	Nominal
		Product Software Check	Nominal
Data Used:	L1 and L2 Fast Delivery Marine (FDM) Mode and L0 Data	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 19-Apr-2020 None 20-Apr-2020 None 21-Apr-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_020200420T052913_20200420T053055_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_020200420T090821_20200420T090846_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200420T083335_20200420T083942_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200420T154431_20200420T154620_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200420T191840_20200420T192259_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200420T205841_20200420T210407_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_020200420T120413_20200420T120655_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_020200420T151455_20200420T151810_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0_20200420T203728_20200420T204209_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_020200420T214828_20200420T215042_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: 7

Product	Test Failed
CS_OFFL_SIR_FDM_1B_20200420T110350_20200420T110433_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200420T123811_20200420T124035_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200420T124035_20200420T124255_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200420T141657_20200420T141815_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200420T141815_20200420T142017_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200420T173205_20200420T173959_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200420T173959_20200420T174056_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_20200420T110350_20200420T110433_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200420T123811_20200420T124035_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200420T141657_20200420T141815_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200420T173205_20200420T173959_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.

0

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. 0

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: 5

Product	Test Failed	Description
CS_OFFL_SIR_FDM_1B_20200420T110350_20200420T110433_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200420T123811_20200420T124035_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200420T141657_20200420T141815_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200420T173205_20200420T173959_C001	Attitude correction missing	The attitude has not been corrected

Echo error, TRK echo error

The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo

6. Level 2 FDM Data Quality Check

6.1 L2 FDM Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a binary product file (.DBL). Number of products with errors: 0

6.2 L2 FDM Product Header Analysis

For all products, a series of pre-defined checks are carried out on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. Number of products with errors: 19

Product	Test Failed
CS_OFFL_SIR_FDM_220200420T002013_20200420T002532_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200420T021125_20200420T024517_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200420T032538_20200420T033741_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200420T044852_20200420T044954_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200420T070502_20200420T070811_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200420T083942_20200420T084227_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200420T110350_20200420T110433_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200420T111721_20200420T111811_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200420T112535_20200420T112623_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200420T123811_20200420T124035_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200420T124035_20200420T124255_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200420T134620_20200420T135236_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200420T141657_20200420T141815_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200420T141815_20200420T142017_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200420T173205_20200420T173959_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200420T173959_20200420T174056_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200420T175418_20200420T175442_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200420T195340_20200420T200909_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200420T225010_20200420T225705_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: 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: 35		
Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200419T235303_20200420T001843_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_220200420T012952_20200420T014803_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_220200420T035058_20200420T041311_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_220200420T053055_20200420T060308_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_220200420T061943_20200420T065140_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_220200420T070956_20200420T072533_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_220200420T072736_20200420T073802_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_220200420T080405_20200420T081611_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_220200420T090538_20200420T090821_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_220200420T094229_20200420T094816_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200420T095100_20200420T101504_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_220200420T102846_20200420T105343_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200420T110350_20200420T110433_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_220200420T112625_20200420T115348_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200420T120745_20200420T123356_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_220200420T130051_20200420T133308_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_220200420T134620_20200420T135236_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200420T135644_20200420T140319_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_220200420T152843_20200420T154431_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_220200420T161714_20200420T162616_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_220200420T162826_20200420T164453_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_220200420T164504_20200420T165037_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_220200420T170442_20200420T172640_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_220200420T172714_20200420T173153_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_220200420T175447_20200420T175456_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_220200420T175756_20200420T181227_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_220200420T181422_20200420T182227_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_220200420T194138_20200420T195137_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_220200420T195340_20200420T200909_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_220200420T202456_20200420T203528_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_220200420T204209_20200420T205353_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_220200420T213301_20200420T214804_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200420T220137_20200420T222839_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200420T230213_20200420T232239_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_220200420T232331_20200420T232730_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records

6.5 L2 FDM Measurement Confidence Data Check

CryoSat L2 data includes a measurement confidence flag (field 8) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set. Number of products with errors: 5

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200420T110350_20200420T110433_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220200420T123811_20200420T124035_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220200420T141657_20200420T141815_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220200420T173205_20200420T173959_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220200420T181422_20200420T182227_C001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo

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_220200419T235303_20200420T001843_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_220200420T012952_20200420T014803_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_20200420T035058_20200420T041311_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_20200420T053055_20200420T060308_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_20200420T061943_20200420T065140_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_20200420T072736_20200420T073802_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_20200420T080405_20200420T081611_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_20200420T090538_20200420T090821_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_20200420T095100_20200420T101504_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_220200420T110350_20200420T110433_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_220200420T120745_20200420T123356_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_220200420T130051_20200420T133308_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_220200420T135644_20200420T140319_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_220200420T161714_20200420T162616_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_220200420T162826_20200420T164453_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_220200420T175756_20200420T181227_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_220200420T181422_20200420T182227_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_220200420T194138_20200420T195137_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_220200420T195340_20200420T200909_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_220200420T202456_20200420T203528_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_220200420T204209_20200420T205353_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_220200420T230213_20200420T232239_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_220200419T235303_20200420T001843_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_2_20200420T012952_20200420T014803_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_220200420T035058_20200420T041311_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_220200420T053055_20200420T060308_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_220200420T061943_20200420T065140_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_220200420T072736_20200420T073802_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_220200420T080405_20200420T081611_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_220200420T090538_20200420T090821_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_220200420T095100_20200420T101504_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_220200420T110350_20200420T110433_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_220200420T120745_20200420T123356_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_2_20200420T130051_20200420T133308_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_220200420T135644_20200420T140319_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_220200420T161714_20200420T162616_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_220200420T162826_20200420T164453_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_220200420T175756_20200420T181227_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_220200420T181422_20200420T182227_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_220200420T194138_20200420T195137_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_220200420T195340_20200420T200909_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_220200420T202456_20200420T203528_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_220200420T204209_20200420T205353_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_220200420T230213_20200420T232239_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.

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Product	Test Failed	Description	
CS_OFFL_SIR_FDM_220200419T235303_20200420T001843_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_220200420T012952_20200420T014803_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_220200420T021125_20200420T024517_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_220200420T035058_20200420T041311_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_220200420T045554_20200420T050203_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_220200420T053055_20200420T060308_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_220200420T061943_20200420T065140_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_220200420T070956_20200420T072533_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_220200420T072736_20200420T073802_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_220200420T080405_20200420T081611_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_220200420T090538_20200420T090821_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_220200420T094229_20200420T094816_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_220200420T095100_20200420T101504_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_220200420T102846_20200420T105343_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_220200420T110350_20200420T110433_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_220200420T112625_20200420T115348_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_220200420T120745_20200420T123356_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_220200420T130051_20200420T133308_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_220200420T135644_20200420T140319_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_220200420T143742_20200420T151201_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_220200420T152520_20200420T152812_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_220200420T152843_20200420T154431_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_220200420T160254_20200420T160327_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_220200420T161714_20200420T162616_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_220200420T162826_20200420T164453_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_220200420T164504_20200420T165037_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_220200420T170442_20200420T172640_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_220200420T172714_20200420T173153_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_220200420T175756_20200420T181227_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_220200420T181422_20200420T182227_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_220200420T182342_20200420T182957_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_220200420T184815_20200420T190042_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_220200420T194138_20200420T195137_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_220200420T195340_20200420T200909_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_220200420T202456_20200420T203528_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_220200420T204209_20200420T205353_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_220200420T213301_20200420T214804_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_220200420T220137_20200420T222839_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.	
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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_	166	166	166	0	0
SIR1SAR_0_	129	129	129	0	0
SIR1SIN_0_	104	104	104	0	0
SIR2SIN_0_	109	109	109	0	0
SIR_FDM_1B	166	166	4	0	162
SIR_FDM_2	164	164	113	51	0

7.1 QCC Errors

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