

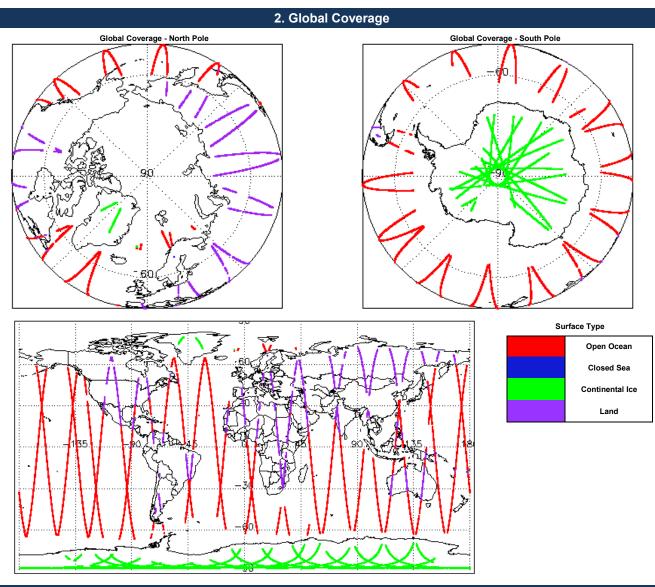
# **QA4EO Daily Report for FDM data:**

# 04/05/2020

1. Overview				
			Check Status	
Report Production Date:	05-May-2020		Server check: science-pds.cryosat.esa.int	Nominal
Processor Used:			Server check: calval-pds.cryosat.esa.int	Nominal
Processor Used:	CryoSat Ice Processor		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 03-May-2020 None 04-May-2020 None

05-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.

15

Number of products with errors:

Product	Test Failed
CS_OPER_SIR1SAR_020200504T001332_20200504T001535_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_020200504T041741_20200504T042143_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_020200504T074114_20200504T074220_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_020200504T122803_20200504T123806_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0_20200504T222512_20200504T223350_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200504T004929_20200504T005015_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200504T055744_20200504T060159_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200504T080541_20200504T081211_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_020200504T113823_20200504T114002_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_0_20200504T190521_20200504T190807_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_020200504T075907_20200504T080302_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_020200504T152759_20200504T153113_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_020200504T172417_20200504T172533_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0_20200504T204230_20200504T204650_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_020200504T214027_20200504T214337_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: 14

Product	Test Failed
CS_OFFL_SIR_FDM_1B_20200504T104546_20200504T104634_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T104634_20200504T104705_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T122300_20200504T122528_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T135939_20200504T140105_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T140105_20200504T140212_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T211415_20200504T213024_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T213403_20200504T213828_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T213835_20200504T213843_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T213850_20200504T214027_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T214506_20200504T220920_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T220923_20200504T220945_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T220951_20200504T221000_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T221003_20200504T221921_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200504T222043_20200504T222124_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. 2

Number of products with errors:

Product	Test Failed
CS_OFFL_SIR_FDM_1B_20200504T104546_20200504T104634_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200504T135939_20200504T140105_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

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.

#### 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:	3

Product	Test Failed	Description
Floudet		The tracking echo has returned an error and the Rx1 Echo Error flag is set,
CS_OFFL_SIR_FDM_1B_20200504T024734_20200504T024826_C001		indicating a degraded echo
CS_OFFL_SIR_FDM_1B_20200504T104546_20200504T104634_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200504T135939_20200504T140105_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: 31

Product	Test Failed
CS_OFFL_SIR_FDM_220200504T030125_20200504T031938_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T033404_20200504T040812_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T064403_20200504T064603_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T064717_20200504T065104_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T080510_20200504T080541_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T092525_20200504T095739_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T104546_20200504T104634_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T104634_20200504T104705_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T122300_20200504T122528_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T122737_20200504T122802_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T134551_20200504T135259_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T135939_20200504T140105_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T140105_20200504T140212_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T150103_20200504T150615_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T155947_20200504T162157_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T164934_20200504T171609_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T182007_20200504T182014_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T191648_20200504T191842_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T202503_20200504T202557_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T203049_20200504T203438_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T203455_20200504T203800_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T211415_20200504T213024_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T213403_20200504T213828_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T213835_20200504T213843_C001.DBL	Product filename start/stop differs slightly from start/stop validity due to rounding.
CS_OFFL_SIR_FDM_220200504T213850_20200504T214027_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T214506_20200504T220920_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T220923_20200504T220945_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T220951_20200504T221000_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T221003_20200504T221921_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T222043_20200504T222124_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200504T223350_20200504T223505_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: 37		
Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200504T001535_20200504T004929_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200504T011537_20200504T012213_C001		There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200504T015512_20200504T022854_C001		There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records

CS_OFFL_SIR_FDM_22	0200504T030125_	20200504T031938_C001	Sea State Bias
CS_OFFL_SIR_FDM_22	0200504T033404_	20200504T040812_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T042144_	20200504T042209_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T043742_	20200504T045519_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T051409_	20200504T052953_C001	Sea State Bias
CS_OFFL_SIR_FDM_22	0200504T052956_	20200504T053526_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T053551_	20200504T054418_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T062208_	20200504T063548_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T065301_	20200504T070822_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T071024_	_20200504T071946_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T074619_	20200504T075907_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T083243_	_20200504T084727_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T092525_	_20200504T095739_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T101230_	_20200504T103701_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T110824_	_20200504T113623_C001	Sea State Bias
CS_OFFL_SIR_FDM_22	0200504T115054_	_20200504T121940_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T124244_	20200504T131516_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T132946_	20200504T133520_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T140631_	_20200504T140802_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T150921_	20200504T152759_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T153113_	20200504T153612_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T164934_	_20200504T171609_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T173939_	20200504T175037_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T175519_	20200504T175645_C001	Sea State Bias Wind Speed
CS_OFFL_SIR_FDM_22	0200504T175702_	20200504T180829_C001	Sea State Bias
CS_OFFL_SIR_FDM_22	0200504T180905_	20200504T181246_C001	Wind Speed Sea State Bias
CS_OFFL_SIR_FDM_22	0200504T192509		Wind Speed Sea State Bias
CS_OFFL_SIR_FDM_2_2	0200504T193717	20200504T195132 C001	Wind Speed Sea State Bias
CS_OFFL_SIR_FDM_22			Wind Speed Sea State Bias
CS_OFFL_SIR_FDM_2_2			Wind Speed Sea State Bias
CS OFFL SIR FDM 2 2			Wind Speed Sea State Bias
CS OFFL SIR FDM 2 2			Wind Speed Sea State Bias
CS OFFL SIR FDM 2 2	-		Sea State Bias
CS_OFFL_SIR_FDM_22			Wind Speed Sea State Bias
	.02003041232441_	202003041233140_000	Wind Speed

te Bias Correction	There is an error with the Sea State Bias Correction for one or more records
te Bias Correction, Altimetric weed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric eed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric eed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction	There is an error with the Sea State Bias Correction for one or more records
te Bias Correction, Altimetric eed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric eed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction	There is an error with the Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric need	There is an error with the Altimetric Wind Speed and Sea State Bias
te Bias Correction, Altimetric	Correction for one or more records There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
te Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
eed te Bias Correction, Altimetric eed	There is an error with the Altimetric Wind Speed and Sea State Bias
te Bias Correction, Altimetric	Correction for one or more records There is an error with the Altimetric Wind Speed and Sea State Bias
eed te Bias Correction, Altimetric	Correction for one or more records There is an error with the Altimetric Wind Speed and Sea State Bias
eed te Bias Correction, Altimetric	Correction for one or more records There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
eed te Bias Correction	Correction for one or more records There is an error with the Sea State Bias Correction for one or more
te Bias Correction, Altimetric	records There is an error with the Altimetric Wind Speed and Sea State Bias
eed te Bias Correction, Altimetric	Correction for one or more records There is an error with the Altimetric Wind Speed and Sea State Bias
eed	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:
3

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200504T024734_20200504T024826_C001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_220200504T104546_20200504T104634_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220200504T135939_20200504T140105_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: 23

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200504T011537_20200504T012213_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_220200504T015512_20200504T022854_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_220200504T033404_20200504T040812_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_220200504T043742_20200504T045519_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_220200504T052956_20200504T053526_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_220200504T062208_20200504T063548_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
CS_OFFL_SIR_FDM_220200504T065301_20200504T070822_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 ignored for these records.
CS_OFFL_SIR_FDM_220200504T071024_20200504T071946_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_220200504T074619_20200504T075907_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_220200504T092525_20200504T095739_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_220200504T101230_20200504T103701_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_220200504T115054_20200504T121940_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_220200504T124244_20200504T131516_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_220200504T150921_20200504T152759_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_220200504T153113_20200504T153612_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_220200504T173939_20200504T175037_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_220200504T175519_20200504T175645_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_220200504T175702_20200504T180829_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_220200504T192509_20200504T193441_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_220200504T193717_20200504T195132_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_220200504T202654_20200504T202926_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_220200504T203049_20200504T203438_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_220200504T224450_20200504T231007_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: 23

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

CS_OFFL_SIR_FDM_220200504T150921_20200504T152759_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_220200504T153113_20200504T153612_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_220200504T173939_20200504T175037_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_220200504T175519_20200504T175645_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_220200504T175702_20200504T180829_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_220200504T192509_20200504T193441_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_220200504T193717_20200504T195132_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_220200504T202654_20200504T202926_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_220200504T203049_20200504T203438_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_220200504T224450_20200504T231007_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.

38

Number of products with errors:

CS_OFFL_SIR_FDM_2_20200504T011537_20200504T012213_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_2_20200504T015512_20200504T0122854_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_2_20200504T031938_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_2_20200504T03404_20200504T04812_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_2_20200504T043225_20200504T04347_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_2_20200504T043225_20200504T045519_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_2_20200504T052965_20200504T052963_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_2_20200504T052965_20200504T053266_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_2_20200504T05252_2020504T052101_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_2_20200504T06252_2020504T063548_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_2_20200504T06252_20200504T063548_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag <th>ag is set indicating the CFI Ocean</th>	ag is set indicating the CFI Ocean
CS_OFFL_SIR_FDM_2_202005041015312_202005041022694_C001         Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not successfully explored in the Ocean Retracking Quality Flag         Retracker was not succes	
CS_OFFL_SIR_FDM_2_20200004103135_202000041031358_CU01         Obean Retracking Quality Filg         Retracker was not successfully explored in the communication of the communicat	recuted for one of more records.
Cs_OFFL_SIR_FDM_2_202005041043225_202005041043647_C001         Ocean Retracking Quality Flag         Retracker was not successfully explored and successfully e	
CS_OFFL_SIR_FDM_2_202005041043243_202005041043847_0001         Ocean Retracking Quality Flag         Retracker was not successfully ex           CS_OFFL_SIR_FDM_2_20200504T043742_20200504T05519_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag         Retracker was not successfully ex           CS_OFFL_SIR_FDM_2_20200504T053956_20200504T053953_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag         Retracker was not successfully ex           CS_OFFL_SIR_FDM_2_20200504T053956_20200504T053356_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag         Retracker was not successfully ex           CS_OFFL_SIR_FDM_2_20200504T053551_20200504T0534418_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag         Retracker was not successfully ex           CS_OFFL_SIR_FDM_2_20200504T062208_20200504T063248_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag         Retracker was not successfully ex           CS_OFFL_SIR_FDM_2_20200504T065301_20200504T07822_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag         Retracker was not successfully ex           CS_OFFL_SIR_FDM_2_20200504T071024_20200504T075907_C001         Ocean Retracking Quality Flag         Retracker was not successfully ex           CS_OFFL_SIR_FDM_2_20200504T0792525_20200504T095739_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_	
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CS_OFFL_SIR_FDM_2202005041062208_202005041003348_C001         Ocean Retracking Quality Flag         Retracker was not successfully ex           CS_OFFL_SIR_FDM_220200504T065301_20200504T070822_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_220200504T071024_20200504T071946_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_220200504T071024_20200504T075907_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_220200504T074619_20200504T075907_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_220200504T0792525_20200504T084727_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_220200504T092525_20200504T095739_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_220200504T101230_20200504T103701_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_220200504T110824_20200504T113623_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_220200504T115054_20200504T121940_C001         Ocean Retracking Quality Flag         The Ocean Retracking Quality Flag           CS_OFFL_SIR_FDM_220200504T11421424_20200504T1131516_C001         Ocean Retracking Quality Flag <td< td=""><td></td></td<>	
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CS_OFFL_SIR_FDM_220200504T153113_20200504T153612_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag Retracker was not successfully ex	ag is set indicating the CFI Ocean
CS_OFFL_SIR_FDM_220200504T155947_20200504T162157_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag Retracker was not successfully ex	ag is set indicating the CFI Ocean
CS_OFFL_SIR_FDM_220200504T164934_20200504T171609_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag Retracker was not successfully ex	ag is set indicating the CFI Ocean
CS_OFFL_SIR_FDM_220200504T173939_20200504T175037_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag Retracker was not successfully ex	ag is set indicating the CFI Ocean
CS_OFFL_SIR_FDM_2_20200504T175519_20200504T175645_C001 Ocean Retracking Quality Flag Retracker was not successfully ex	ag is set indicating the CFI Ocean
CS_OFFL_SIR_FDM_220200504T175702_20200504T180829_C001 Ocean Retracking Quality Flag Retracker was not successfully ex	ag is set indicating the CFI Ocean
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CS_OFFL_SIR_FDM_220200504T202654_20200504T202926_C001		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_220200504T203049_20200504T203438_C001		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_220200504T203455_20200504T203800_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_220200504T211415_20200504T213024_C001		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_220200504T214506_20200504T220920_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_220200504T224450_20200504T231007_C001		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_220200504T232441_20200504T235146_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_	171	171	171	0	0
SIR1SAR_0_	117	117	117	0	0
SIR1SIN_0_	110	110	110	0	0
SIR2SIN_0_	107	107	107	0	0
SIR_FDM_1B	171	171	2	0	169
SIR_FDM_2	168	168	116	52	0
Number of QCC reports with err 7.2 QCC Warnings	rors: 169				
Number of QCC reports with wa	arnings 56				
7.3 Missing QCC Repo	rts				
Number of products with missing	ng QCC reports: 0				