



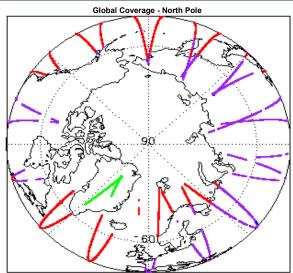
# 1. Overview

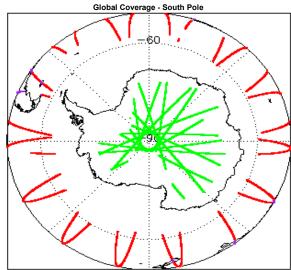
Report Production Date:	25-Jul-2019	
Processor Used:	CryoSat Ice Processor	
Data Used:	L1 and L2 Fast Delivery Marine (FDM)	

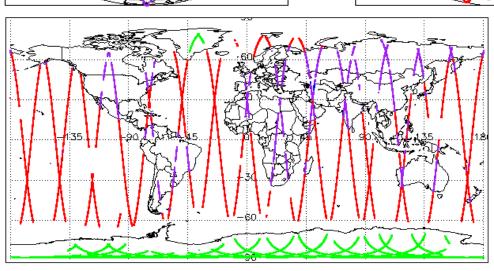
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	See Section 4.2, 5.2 and 6.2
Star Tracker Usage Check	See Section 5.3
Calibration Usage Check	Nominal
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	See Section 6.4
Measurement Confidence Data Check	See Section 5.7, 6.5, 6.6, 6.7 and 6.8

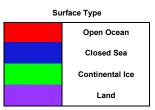
Mission / Instrument News		
23-Jul-2019	None	
24-Jul-2019	None	
25-Jul-2019	Nothing planned	

# 2. Global Coverage









# 3. Instrument Configuration

The SIRAL instrument configuration for the day of acquisition is provided below.

SIRAL instrument(s) in use:	SIRAL - A
Star Tracker(s) in use:	Star Tracker 1

# 4. Level 0 Data Quality Check

## 4.1 L0 Product Format Check

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

#### 4.2 L0 Product Header Analysis

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

Number of products with errors:

Product	Test Failed
CS_OPER_SIR1SAR_020190724T111318_20190724T111610_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_020190724T222708_20190724T223015_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_020190724T091305_20190724T092038_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:

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Product	Test Failed
CS_OFFL_SIR_FDM_1B_20190724T022755_20190724T023403_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20190724T040558_20190724T040726_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20190724T022755_20190724T022755_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20190724T040430_20190724T040558_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20190724T072842_20190724T072857_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20190724T005135_20190724T005204_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20190724T072111_20190724T072842_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20190724T005046_20190724T005135_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).

#### 5.3 L1B FDM Star Tracker Usage Check

Each product is checked in order to ensure a valid star tracker file has been used in processing.

Number of products with errors:

Product	Test Failed
CS_OFFL_SIR_FDM_1B_20190724T005046_20190724T005135_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20190724T022755_20190724T022755_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20190724T040430_20190724T040558_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20190724T072111_20190724T072842_C001	No Star Tracker file used in the processing of this product

## 5.4 L1B FDM Calibration Usage Check

Each product is checked in order to ensure the necessary calibration files have been used in processing.

Number of products with errors:

### 5.5 L1B FDM Auxilary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

Number of products with errors:

## 5.6 L1B FDM Auxiliary Correction Error Check

CryoSat L1B data includes a correction error flag (field 54) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

#### 5.7 L1B FDM Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag (field 18) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_FDM_1B_20190724T004541_20190724T005017_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_20190724T005046_20190724T005135_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20190724T022755_20190724T022755_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20190724T040430_20190724T040558_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20190724T072111_20190724T072842_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20190724T121452_20190724T122417_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_20190724T183316_20190724T190432_C001	IECHO EFFOR TRK ECHO EFFOR	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:

# 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:

8

Product	Test Failed
CS_OFFL_SIR_FDM_220190724T022755_20190724T023403_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220190724T040558_20190724T040726_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220190724T022755_20190724T022755_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220190724T040430_20190724T040558_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220190724T072842_20190724T072857_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220190724T005135_20190724T005204_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220190724T072111_20190724T072842_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220190724T005046_20190724T005135_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).

## 6.3 L2 FDM Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

Number of products with errors:

0

## 6.4 L2 FDM Auxiliary Correction Error Check

Each product is checked to detect auxiliary corrections flagged by the ground-station processing chain as missing or containing errors.

Number of products with errors:

20

Product	Test Failed	Description
CS OFFL SIR FDM 2 20190724T011415 20190724T012444 C001	Sea State Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bias
S OFFL SIR FDM 2 20190724T015650 20190724T022301 C001	Wind Speed Sea State Bias Correction, Altimetric	Correction for one or more records There is an error with the Altimetric Wind Speed and Sea State Bias
S OFFL SIR FDM 2 20190724T022755 20190724T023403 C001	Wind Speed Sea State Bias Correction, Altimetric	Correction for one or more records There is an error with the Altimetric Wind Speed and Sea State Bias
S OFFL SIR FDM 2 20190724T024751 20190724T030357 C001	Wind Speed Sea State Bias Correction, Altimetric	Correction for one or more records There is an error with the Altimetric Wind Speed and Sea State Bias
S OFFL SIR FDM 2 20190724T030428 20190724T031905 C001	Wind Speed Sea State Bias Correction, Altimetric	Correction for one or more records  There is an error with the Altimetric Wind Speed and Sea State Bias
S OFFL SIR FDM 2 20190724T033543 20190724T034015 C001	Wind Speed Sea State Bias Correction, Altimetric	Correction for one or more records  There is an error with the Altimetric Wind Speed and Sea State Bias
S OFFL SIR FDM 2 20190724T042613 20190724T045901 C001	Wind Speed Sea State Bias Correction	Correction for one or more records There is an error with the Sea State Bias Correction for one or more
S OFFL SIR FDM 2 20190724T051623 20190724T053252 C001	Sea State Bias Correction, Altimetric	records There is an error with the Altimetric Wind Speed and Sea State Bias
S OFFL SIR FDM 2 20190724T053605 20190724T054115 C001	Wind Speed Sea State Bias Correction	Correction for one or more records There is an error with the Sea State Bias Correction for one or more
S_OFFL_SIR_FDM_2_20190724T055159_20190724T055204_C001	Sea State Bias Correction, Altimetric	records There is an error with the Altimetric Wind Speed and Sea State Bias
S_OFFL_SIR_FDM_220190724T060232_20190724T063750_C001	Wind Speed Sea State Bias Correction, Altimetric	Correction for one or more records There is an error with the Altimetric Wind Speed and Sea State Bias
S OFFL SIR FDM 2 20190724T065501 20190724T072046 C001	Wind Speed Sea State Bias Correction, Altimetric	Correction for one or more records There is an error with the Altimetric Wind Speed and Sea State Bias
S_OFFL_SIR_FDM_2_20190724T072111_20190724T072842_C001	Wind Speed Sea State Bias Correction, Altimetric	Correction for one or more records There is an error with the Altimetric Wind Speed and Sea State Bias
S_OFFL_SIR_FDM_2_20190724T074110_20190724T075535_C001	Wind Speed Sea State Bias Correction, Altimetric Wind Speed	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
S_OFFL_SIR_FDM_220190724T080154_20190724T081712_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
S_OFFL_SIR_FDM_220190724T083604_20190724T084830_C001	Sea State Bias Correction, Altimetric Wind Speed	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
S_OFFL_SIR_FDM_220190724T085039_20190724T090808_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
S_OFFL_SIR_FDM_220190724T093006_20190724T093937_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
S_OFFL_SIR_FDM_2_20190724T094139_20190724T095606_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
S_OFFL_SIR_FDM_220190724T102957_20190724T103420_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
S_OFFL_SIR_FDM_220190724T103543_20190724T104256_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
S_OFFL_SIR_FDM_220190724T111930_20190724T113503_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
S_OFFL_SIR_FDM_220190724T124931_20190724T131410_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
S_OFFL_SIR_FDM_220190724T134611_20190724T140109_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
S_OFFL_SIR_FDM_220190724T141748_20190724T142409_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
S_OFFL_SIR_FDM_220190724T142712_20190724T145344_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
S_OFFL_SIR_FDM_220190724T150959_20190724T154254_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
S_OFFL_SIR_FDM_220190724T155527_20190724T155806_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
S_OFFL_SIR_FDM_220190724T164904_20190724T171011_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
S_OFFL_SIR_FDM_220190724T171257_20190724T172433_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
S_OFFL_SIR_FDM_220190724T180054_20190724T181107_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
S_OFFL_SIR_FDM_220190724T183316_20190724T190432_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_220190724T202909_20190724T203612_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_220190724T205739_20190724T211314_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_220190724T211933_20190724T213012_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_220190724T220237_20190724T221756_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_220190724T223932_20190724T224641_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220190724T224804_20190724T225237_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_220190724T232642_20190724T234824_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:

6

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220190724T004541_20190724T005017_C001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_220190724T005046_20190724T005135_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220190724T040430_20190724T040558_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220190724T072111_20190724T072842_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220190724T121452_20190724T122417_C001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_220190724T183316_20190724T190432_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:

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Product	Test Failed	Description
CS_OFFL_SIR_FDM_220190724T011415_20190724T012444_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.
SS_OFFL_SIR_FDM_220190724T015650_20190724T022301_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.
S_OFFL_SIR_FDM_220190724T022755_20190724T023403_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.
S_OFFL_SIR_FDM_220190724T024751_20190724T030357_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.
S_OFFL_SIR_FDM_220190724T060232_20190724T063750_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.
S_OFFL_SIR_FDM_220190724T065501_20190724T072046_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.
S_OFFL_SIR_FDM_2_20190724T074110_20190724T075535_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.
S_OFFL_SIR_FDM_220190724T080154_20190724T081712_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.
S_OFFL_SIR_FDM_220190724T083604_20190724T084830_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.
S_OFFL_SIR_FDM_220190724T085039_20190724T090808_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.
S_OFFL_SIR_FDM_220190724T093006_20190724T093937_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.
S_OFFL_SIR_FDM_220190724T094139_20190724T095606_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.
S_OFFL_SIR_FDM_220190724T102957_20190724T103420_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.
S_OFFL_SIR_FDM_220190724T103543_20190724T104256_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.
S_OFFL_SIR_FDM_2_20190724T111930_20190724T113503_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.
S_OFFL_SIR_FDM_220190724T124931_20190724T131410_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.
S_OFFL_SIR_FDM_220190724T141748_20190724T142409_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.
S_OFFL_SIR_FDM_220190724T142712_20190724T145344_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.
S_OFFL_SIR_FDM_220190724T150959_20190724T154254_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.
S_OFFL_SIR_FDM_220190724T155527_20190724T155806_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.
S_OFFL_SIR_FDM_2_20190724T171257_20190724T172433_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.
S_OFFL_SIR_FDM_220190724T183316_20190724T190432_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_220190724T202909_20190724T203612_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_220190724T205739_20190724T211314_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_220190724T211933_20190724T213012_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_220190724T220237_20190724T221756_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_220190724T224804_20190724T225237_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_220190724T232642_20190724T234824_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: 28

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220190724T011415_20190724T012444_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_220190724T015650_20190724T022301_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_220190724T022755_20190724T023403_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_220190724T024751_20190724T030357_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_220190724T060232_20190724T063750_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_220190724T065501_20190724T072046_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_20190724T074110_20190724T075535_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_20190724T080154_20190724T081712_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_220190724T083604_20190724T084830_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_220190724T085039_20190724T090808_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_220190724T093006_20190724T093937_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_220190724T094139_20190724T095606_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_20190724T102957_20190724T103420_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_220190724T103543_20190724T104256_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_220190724T111930_20190724T113503_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_20190724T124931_20190724T131410_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_20190724T141748_20190724T142409_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_20190724T142712_20190724T145344_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_20190724T150959_20190724T154254_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_220190724T155527_20190724T155806_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_220190724T171257_20190724T172433_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_220190724T183316_20190724T190432_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_220190724T202909_20190724T203612_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_220190724T205739_20190724T211314_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_220190724T211933_20190724T213012_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_220190724T220237_20190724T221756_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.

	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_220190724T232642_20190724T234824_C001	CFI Backscatter Status Flag, SWH	The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #41, #42, #43 and #44 should be ignored for these records.

#### 6.8 L2 FDM Ocean Retracking Quality Check

CS\_OFFL\_SIR\_FDM\_2\_\_20190724T232642\_20190724T234824\_C001

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

Test Failed Description The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T001746\_20190724T004209\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T011415 20190724T012444 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T015650 20190724T022301 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T022755 20190724T023403 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T024751\_20190724T030357\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T030428\_20190724T031905\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T042613\_20190724T045901\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more record The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T055159\_20190724T055204\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T060232\_20190724T063750\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T065501 20190724T072046 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T074110\_20190724T075535\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean Ocean Retracking Quality Flag CS\_OFFL\_SIR\_FDM\_2\_\_20190724T080016\_20190724T080152\_C001 Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T080154 20190724T081712 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T083604\_20190724T084830\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T085039\_20190724T090808\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T093006 20190724T093937 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T094139\_20190724T095606\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T101256\_20190724T101403\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T102957 20190724T103420 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T103543\_20190724T104256\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T111930 20190724T113503 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T115042 20190724T121450 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T124931\_20190724T131410\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T134611 20190724T140109 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T141748\_20190724T142409\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T142712\_20190724T145344\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T150959 20190724T154254 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T155527\_20190724T155806\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T171257\_20190724T172433\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T173405 20190724T173824 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T182814\_20190724T183306\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T183316\_20190724T190432\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T202909 20190724T203612 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T205739\_20190724T211314\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T211933 20190724T213012 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T214654\_20190724T220057\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T220237\_20190724T221756\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS OFFL SIR FDM 2 20190724T223932 20190724T224641 C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean CS\_OFFL\_SIR\_FDM\_2\_\_20190724T224804\_20190724T225237\_C001 Ocean Retracking Quality Flag Retracker was not successfully executed for one or more records. The Ocean Retracking Quality Flag is set indicating the CFI Ocean

Ocean Retracking Quality Flag

Retracker was not successfully executed for one or more records.

# 7. QCC Report Analysis

The Quality Control for CryoSat (QCC) facility performs a primary survey of data products immediately after production by the PDS and LTA processing facilities. A list of the tests which raised errors or warnings is provided below.

Product type	Nb. Products	Nb. QCC Reports	Nb. Valid	Nb. Warnings	Nb. Errors
SIR1LRM_0_	143	143	143	0	0
SIR1SAR_0_	141	111	111	0	0
SIR1SIN_0_	111	111	111	0	0
SIR_FDM_1B	143	141	143	0	0
SIR FDM 2	141	141	141	0	0

### 7.1 QCC Errors

Number of QCC reports with errors:

0

### 7.2 QCC Warnings

Number of QCC reports with warnings

0

# 7.3 Missing QCC Reports

Number of products with missing QCC reports:

120