

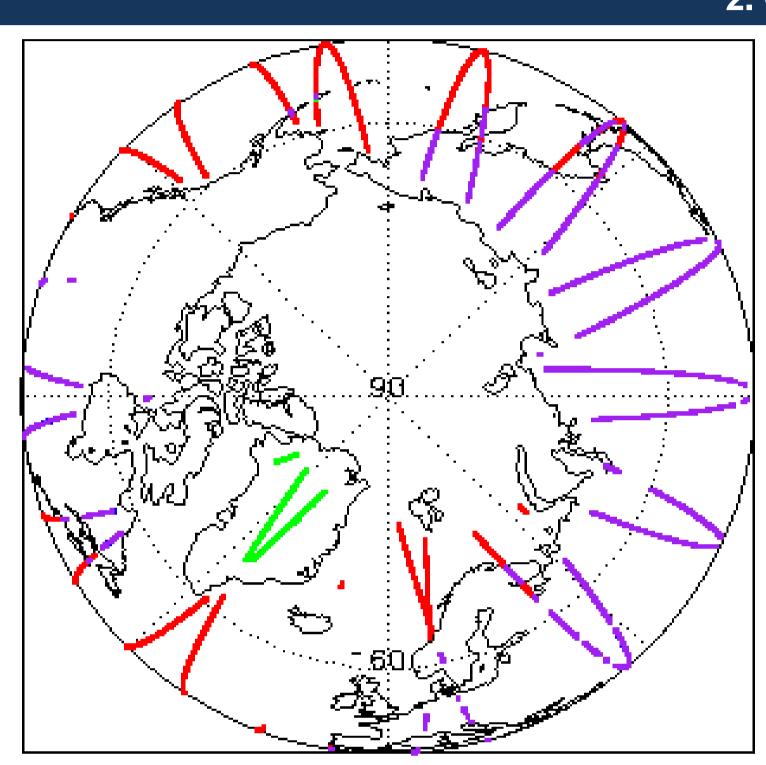
# 1. Overview

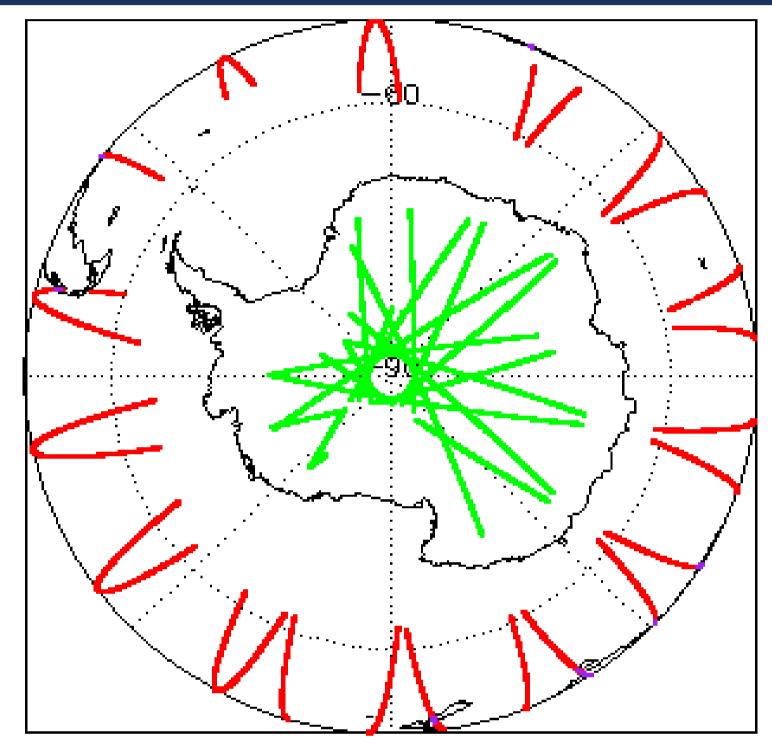
Report Production Date:	22-Jun-2020	
Processor Used:	CryoSat Ice Processor	
Data Used:	L1 and L2 Fast Delivery Marine (FDM)  Mode and L0 Data	

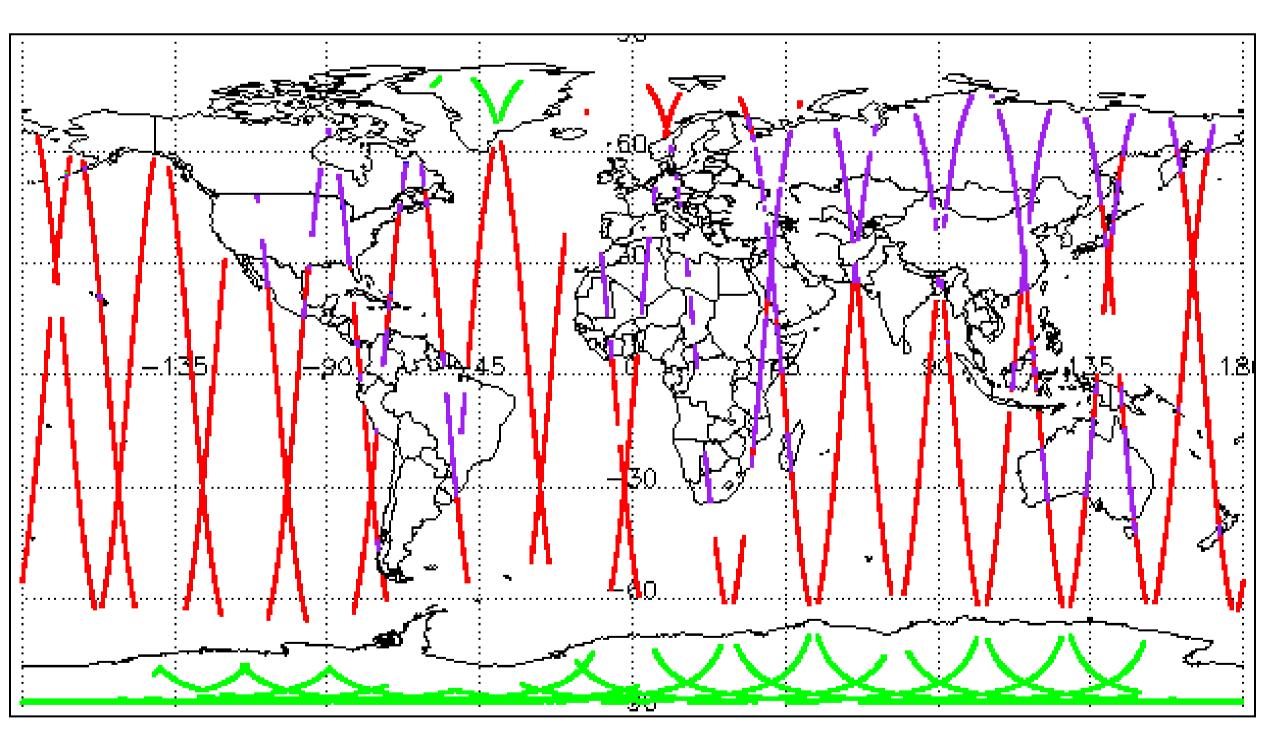
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	See Section 4.2, 5.2 and 6.2
Star Tracker Usage Check	See Section 5.3
Calibration Usage Check	Nominal
Auxiliary Data File Usage Check	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
QCC Error/ Warning Check	See Section 7.1 and 7.2

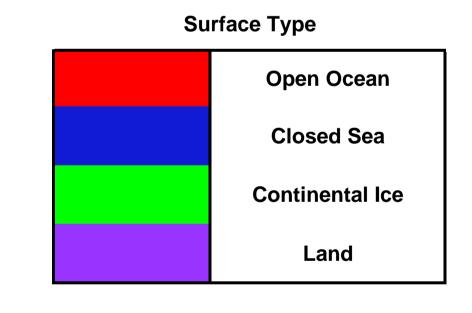
Mi	Mission / Instrument News		
•	19-Jun-2020	None	
2	20-Jun-2020	None	
2	21-Jun-2020	Nothing planned	

# 2. Global Coverage









# 3. Instrument Configuration

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

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

# 4. Level 0 Data Quality Check

## 4.1 L0 Product Format Check

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

#### **4.2 L0 Product Header Analysis**

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

Number of products with errors:

Product Test Failed

CS\_OPER\_SIR2SIN\_0\_\_20200620T204818\_20200620T204942\_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:

Product	Test Failed
CS_OFFL_SIR_FDM_1B_20200620T085155_20200620T085837_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200620T085837_20200620T090018_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200620T103422_20200620T103531_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200620T103531_20200620T103540_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200620T121358_20200620T121418_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200620T153743_20200620T153902_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_1B_20200620T153902_20200620T154059_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_20200620T085155_20200620T085837_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200620T103422_20200620T103531_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20200620T153743_20200620T153902_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: 0

#### **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_20200620T085155_20200620T085837_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200620T103422_20200620T103531_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200620T153743_20200620T153902_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20200620T184521_20200620T185213_C001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_FDM_1B_20200620T204942_20200620T205505_C001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo

### 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).

#### **6.2 L2 FDM Product Header Analysis**

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

**Number of products with errors:** 

Product	Test Failed
CS_OFFL_SIR_FDM_220200620T043519_20200620T043810_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200620T085155_20200620T085837_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200620T085837_20200620T090018_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200620T103422_20200620T103531_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200620T103531_20200620T103540_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200620T121358_20200620T121418_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200620T153743_20200620T153902_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200620T153902_20200620T154059_C001.DBL	FOS Predicted Orbit (MPL_ORBPRE) used instead of the DORIS Navigator Orbit (DOR_NAV).
CS_OFFL_SIR_FDM_220200620T160930_20200620T160936_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:

9

### **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.

Product	Test Failed	Description
S_OFFL_SIR_FDM_220200620T014748_20200620T022043_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_220200620T022045_20200620T022406_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_220200620T023512_20200620T023522_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_220200620T024424_20200620T030833_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_220200620T032737_20200620T034421_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia. Correction for one or more records
CS_OFFL_SIR_FDM_220200620T034902_20200620T040323_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T041712_20200620T043306_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T052229_20200620T054308_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia.  Correction for one or more records
S_OFFL_SIR_FDM_220200620T060037_20200620T060806_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T061713_20200620T063039_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T064551_20200620T070817_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T073414_20200620T073428_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T074422_20200620T081022_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia Correction for one or more records
CS_OFFL_SIR_FDM_220200620T100415_20200620T102407_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T102434_20200620T103224_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T103845_20200620T104148_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T105450_20200620T112756_C001	Sea State Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bia
CS_OFFL_SIR_FDM_220200620T124555_20200620T130729_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 Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T134418_20200620T134847_C001	Wind Speed Sea State Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T141045_20200620T144602_C001	Wind Speed Sea State Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bia
CS_OFFL_SIR_FDM_220200620T150505_20200620T153613_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 Bia  Correction for one or more records
S_OFFL_SIR_FDM_220200620T154914_20200620T160350_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 Bia
S_OFFL_SIR_FDM_220200620T160830_20200620T160922_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  Correction for one or more records
CS_OFFL_SIR_FDM_220200620T160939_20200620T162537_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 Bia  Correction for one or more records
CS_OFFL_SIR_FDM_220200620T164255_20200620T165646_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 Bia  Correction for one or more records
S_OFFL_SIR_FDM_220200620T165859_20200620T171137_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 Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T173833_20200620T174850_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 Bia  Correction for one or more records
CS_OFFL_SIR_FDM_220200620T182050_20200620T182228_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 Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T182428_20200620T183503_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 Bia Correction for one or more records
S_OFFL_SIR_FDM_220200620T183705_20200620T184238_C001	Wind Speed Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bia
S_OFFL_SIR_FDM_220200620T184521_20200620T185213_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 records
S_OFFL_SIR_FDM_220200620T185521_20200620T185532_C001	Sea State Bias Correction, Altimetric	There is an error with the Altimetric Wind Speed and Sea State Bia
CS_OFFL_SIR_FDM_220200620T192129_20200620T194304_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 Bia  Correction for one or more records
CS_OFFL_SIR_FDM_220200620T195826_20200620T202550_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

CS_OFFL_SIR_FDM_220200620T205759_20200620T212300_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_220200620T213803_20200620T221115_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_220200620T224615_20200620T225205_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_220200620T225724_20200620T230210_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_220200620T231755_20200620T235056_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records

#### 6.5 L2 FDM Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200620T085155_20200620T085837_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220200620T103422_20200620T103531_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220200620T153743_20200620T153902_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_220200620T184521_20200620T185213_C001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_220200620T204942_20200620T205505_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.

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200620T014748_20200620T022043_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_220200620T022045_20200620T022406_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_220200620T023512_20200620T023522_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_220200620T032737_20200620T034421_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_220200620T034902_20200620T040323_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_220200620T041712_20200620T043306_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_220200620T052229_20200620T054308_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_220200620T060037_20200620T060806_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_220200620T064551_20200620T070817_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_220200620T073414_20200620T073428_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_220200620T074422_20200620T081022_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_220200620T100415_20200620T102407_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_220200620T102434_20200620T103224_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_220200620T103845_20200620T104148_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_220200620T124555_20200620T130729_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_220200620T134418_20200620T134847_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_220200620T141045_20200620T144602_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_220200620T154914_20200620T160350_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_220200620T160830_20200620T160922_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_220200620T160939_20200620T162537_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_220200620T164255_20200620T165646_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_220200620T165859_20200620T171137_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_220200620T173833_20200620T174850_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_220200620T182428_20200620T183503_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_220200620T183705_20200620T184238_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_220200620T185521_20200620T185532_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_220200620T192129_20200620T194304_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_220200620T195826_20200620T202550_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_220200620T205759_20200620T212300_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_220200620T224615_20200620T225205_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_220200620T231755_20200620T235056_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.

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200620T014748_20200620T022043_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_220200620T022045_20200620T022406_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_220200620T023512_20200620T023522_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_220200620T032737_20200620T034421_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_220200620T034902_20200620T040323_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_220200620T041712_20200620T043306_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_220200620T052229_20200620T054308_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_220200620T060037_20200620T060806_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_220200620T064551_20200620T070817_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_220200620T073414_20200620T073428_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_220200620T074422_20200620T081022_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_220200620T100415_20200620T102407_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_220200620T102434_20200620T103224_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_220200620T103845_20200620T104148_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_220200620T124555_20200620T130729_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_220200620T134418_20200620T134847_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_220200620T141045_20200620T144602_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_220200620T154914_20200620T160350_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_220200620T160830_20200620T160922_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_220200620T160939_20200620T162537_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_220200620T164255_20200620T165646_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_220200620T165859_20200620T171137_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_220200620T173833_20200620T174850_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_220200620T182428_20200620T183503_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_220200620T183705_20200620T184238_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_220200620T185521_20200620T185532_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_220200620T192129_20200620T194304_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_220200620T195826_20200620T202550_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_220200620T205759_20200620T212300_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_220200620T224615_20200620T225205_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_220200620T231755_20200620T235056_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.

Product	Test Failed	Description
CS_OFFL_SIR_FDM_220200620T000841_20200620T003002_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_220200620T003247_20200620T004336_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_220200620T014748_20200620T022043_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_220200620T022045_20200620T022406_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_220200620T023512_20200620T023522_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_220200620T024424_20200620T030833_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.
S_OFFL_SIR_FDM_220200620T032737_20200620T034421_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.
S_OFFL_SIR_FDM_220200620T034902_20200620T040323_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.
S_OFFL_SIR_FDM_220200620T041712_20200620T043306_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.
S_OFFL_SIR_FDM_220200620T050633_20200620T052050_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.
S_OFFL_SIR_FDM_220200620T052229_20200620T054308_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.
S_OFFL_SIR_FDM_220200620T060037_20200620T060806_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.
S_OFFL_SIR_FDM_220200620T060809_20200620T061017_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.
S_OFFL_SIR_FDM_220200620T061713_20200620T063039_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.
S_OFFL_SIR_FDM_220200620T064551_20200620T070817_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.
S_OFFL_SIR_FDM_220200620T073414_20200620T073428_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.
S_OFFL_SIR_FDM_220200620T074422_20200620T081022_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.
S_OFFL_SIR_FDM_220200620T092306_20200620T094853_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.
S_OFFL_SIR_FDM_220200620T100415_20200620T102407_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.
S_OFFL_SIR_FDM_220200620T102409_20200620T102432_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.
S_OFFL_SIR_FDM_220200620T102434_20200620T103224_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.
S_OFFL_SIR_FDM_220200620T103845_20200620T104148_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.
S_OFFL_SIR_FDM_220200620T105450_20200620T112756_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.
S_OFFL_SIR_FDM_220200620T123354_20200620T124310_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.
S_OFFL_SIR_FDM_220200620T124555_20200620T130729_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.
S_OFFL_SIR_FDM_220200620T134418_20200620T134847_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.
S_OFFL_SIR_FDM_220200620T141045_20200620T144602_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.
S_OFFL_SIR_FDM_220200620T150505_20200620T153613_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.
S_OFFL_SIR_FDM_220200620T154914_20200620T160350_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.
S_OFFL_SIR_FDM_220200620T160830_20200620T160922_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.
S_OFFL_SIR_FDM_220200620T160939_20200620T162537_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.
S_OFFL_SIR_FDM_220200620T164255_20200620T165646_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.
S_OFFL_SIR_FDM_220200620T165859_20200620T171137_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.
		The Ocean Retracking Quality Flag is set indicating the CFI Ocean

CS OFFI SID FDM 2 20200620T175020 20200620T190444 C004	Occan Batrocking Quality Flag	The Ocean Retracking Quality Flag is set indicating the CFI Ocean
CS_OFFL_SIR_FDM_220200620T175029_20200620T180441_C001	Ocean Retracking Quality Flag	Retracker was not successfully executed for one or more records.
CS_OFFL_SIR_FDM_220200620T182428_20200620T183503_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_220200620T183705_20200620T184238_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_220200620T184521_20200620T185213_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_220200620T185521_20200620T185532_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_220200620T192129_20200620T194304_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_220200620T195826_20200620T202550_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_220200620T204743_20200620T204818_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_220200620T205759_20200620T212300_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_220200620T213803_20200620T221115_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_220200620T223350_20200620T224112_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_220200620T224615_20200620T225205_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_220200620T231755_20200620T235056_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_	143	143	143	0	0
SIR1SAR_0_	109	109	109	0	0
SIR1SIN_0_	99	99	99	0	0
SIR2SIN_0_	105	105	105	0	0
SIR_FDM_1B	143	143	3	0	140
SIR_FDM_2	142	142	86	56	0

#### 7.1 QCC Errors

**Number of QCC reports with errors:** 

140

192

Total number of occurrences of each error

<b>Product Type</b>	UVOB	-	-	-	-	-	-	-	-	-	-
SIR_FDM_1B	140										

<b>Test Description Key:</b>		
Abbreviation	Test name	Details
UVOB	UnitVectorOrBlank_6	The three array elements should form a unit vector (using a scale factor of 10^-6)

### 7.2 QCC Warnings

**Number of QCC reports with warnings** 

Total number of occurrences of each warning

<b>Product Type</b>	MVSIO	MVSIOFD	RBSZO	RBSZOFD	RSSBCO	-	-	-	-	-	-
SIR_FDM_2_	39	48	40	48	17						

Test Description Key:						
Abbreviation	Test name	Details				
MVSIO	MissingValueShortIntOcean	The value should not be a 'missing value' for surface type 0 only				
MVSIOFD	MissingValueShortIntOceanFD2	The value should not be a 'missing value' for surface type 0 only				
RBSZO	RangeBackscatterSigmaZeroOcean	The backscatter sigma zero should be between 700 and 3000 (or missing) for surface type = ocean				
RBSZOFD	RangeBackscatterSigmaZeroOceanFD2	The backscatter sigma zero should be between 700 and 3000 (or missing) for surface type = ocean				
RSSBCO	RangeSeaStateBiasCorrectionOcean	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean				

# 7.3 Missing QCC Reports

Number of products with missing QCC reports:

0