

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

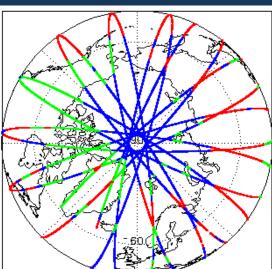
<u>13/04/2021</u>

# 1. Overview

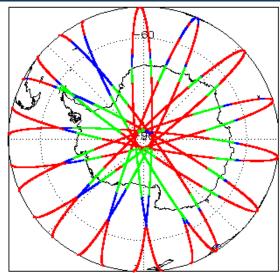
Demont Bradwatian Data	12 May 2021	Check	Status	
Report Production Date:	13-May-2021	Server check: science-pds.cryosat.esa.int	Nominal	
Processor Used:	Cruce Set los Prossoor	Server check: calval-pds.cryosat.esa.int	Nominal	
Processor Used.	CryoSat Ice Processor	Product Software Check	Nominal	
Data Used:	L1B and L2 OFFLINE Data	Product Format Check	Nominal	
	LID and LZ OFFLINE Data	Product Header Analysis	Nominal	
		Star Tracker Usage Check	Nominal	
		L1B Tracking Flag Check	See Section 4.4	
		L1B Calibration Usage Check	Nominal	
		L1B & L2 Auxiliary Data File Usage Check	Nominal	
		L1B & L2 Auxiliary Correction Error Check	Nominal	
		L1B & L2 Measurement Confidence Data Check	See Section 4.8 and 5.5	
		QCC Errors/ Warnings	See Section 6.1, 6.2 and 6.3	

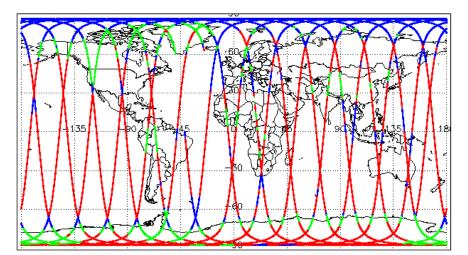
# Mission / Instrument News

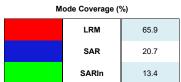
12-Apr-2021	Due to MMFU recovery, SIRAL unavailability on 12/04/2021 from 15:52:20 to 16:06:02
13-Apr-2021	None
14-Apr-2021	Nothing planned

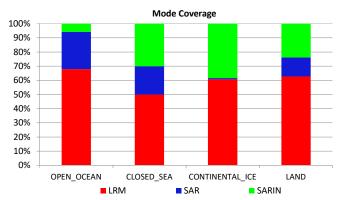


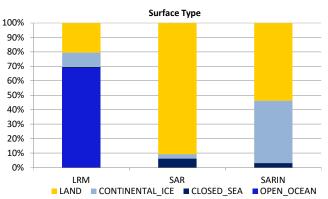












# 3. Instrument Configuration

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

SIRAL instrument(s) in use:

SIRAL - A

0

# 4. Level 1B Data Quality Check

### 4.1 L1B 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 product file (.DBL).

Number of products with errors:

### 4.2 L1B 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:

#### 4.3 Star Tracker Usage Check

Each product is checked in order to ensure a valid star tracker file has been used in processing. 0

Number of products with errors:

# 4.4 L1B Tracking Flags Check

CryoSat L1B data includes a tracking flag for each measurement record. The bit value of this flag indicates any problems when set.

Loss of Echo Flag: This flag is currently set for some products over land, but this is to be expected.

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#### Number of products with errors:

CS_OFFL_SIR_LRM_1B_20210413T001301_20210413T001303_D001		
	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T001307_20210413T001338_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T001340_20210413T001415_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T001418_20210413T001420_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T001702_20210413T003151_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T003630_20210413T004238_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T004305_20210413T004920_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T005648_20210413T005905_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T010735_20210413T012001_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T015154_20210413T015203_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T015207_20210413T015228_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T015230_20210413T015305_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T015307_20210413T015313_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T015317_20210413T015440_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T015443_20210413T015532_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T015534_20210413T015547_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T015700_20210413T015741_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T021306_20210413T022830_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T024944_20210413T025606_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T030150_20210413T031318_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T031352_20210413T031426_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T031550_20210413T031723_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T033032_20210413T033514_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T033558_20210413T034223_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T034251_20210413T034410_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T041520_20210413T041636_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T042100_20210413T044800_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T045024_20210413T045547_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T045711_20210413T045801_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T050952_20210413T051618_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T051621_20210413T051647_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T051828_20210413T051916_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T051919_20210413T051921_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T052134_20210413T054149_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T065028_20210413T065944_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T065949_20210413T072649_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T073319_20210413T073648_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T074007_20210413T081447_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T082808_20210413T082920_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T083122_20210413T083339_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T083412_20210413T083502_D001	Loss of echo	The tracking echo is missing for one or more records

CS OFFL SIR LRM 1B 20210413T083648 20210413T083752 D001 CS OFFL SIR LRM 1B 20210413T083936 20210413T084824 D001 CS OFFL SIR LRM 1B 20210413T084920 20210413T085717 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T090818\_20210413T091343\_D001 CS OFFL SIR LRM 1B 20210413T101256 20210413T101307 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T101333\_20210413T101419\_D001 CS OFFL SIR LRM 1B 20210413T101710 20210413T102243 D001 CS OFFL SIR LRM 1B 20210413T104743 20210413T105242 D001 CS OFFL SIR LRM 1B 20210413T105841 20210413T113134 D001 CS OFFL SIR LRM 1B 20210413T113423 20210413T113450 D001 CS OFFL SIR LRM 1B 20210413T113452 20210413T113523 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T122955\_20210413T123148\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T123849\_20210413T125414\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T125416\_20210413T125608\_D001 CS OFFL SIR LRM 1B 20210413T130049 20210413T130905 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T130908\_20210413T130931\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T131218\_20210413T131220\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T131224\_20210413T131326\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T131330\_20210413T131337\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T131339\_20210413T131341\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T131344\_20210413T131345\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T131348\_20210413T131405\_D001 CS OFFL SIR LRM 1B 20210413T131408 20210413T131410 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T131413\_20210413T131419\_D001 CS OFFL SIR LRM 1B 20210413T131421 20210413T131423 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T131426\_20210413T131429\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T131433\_20210413T131446\_D001 CS OFFL SIR LRM 1B 20210413T131448 20210413T131511 D001 CS OFFL SIR LRM 1B 20210413T134707 20210413T140148 D001 CS OFFL SIR LRM 1B 20210413T140850 20210413T141100 D001 CS OFFL SIR LRM 1B 20210413T141747 20210413T143313 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T143513\_20210413T144434\_D001 CS OFFL SIR LRM 1B 20210413T144534 20210413T144609 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T144612\_20210413T144614\_D001 CS OFFL SIR LRM 1B 20210413T144617 20210413T145007 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T145012\_20210413T145046\_D001 CS OFFL SIR LRM 1B 20210413T145048 20210413T145057 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T145100\_20210413T145501\_D001 CS\_OFEL\_SIR\_LRM\_1B\_20210413T150917\_20210413T151100\_D001 CS OFFL SIR LRM 1B 20210413T151200 20210413T151933 D001 CS OFFL SIR LRM 1B 20210413T151935 20210413T152245 D001 CS OFFL SIR LRM 1B 20210413T152249 20210413T152408 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T162112\_20210413T162144\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T162532\_20210413T162607\_D001 CS OFFL SIR LRM 1B 20210413T162704 20210413T162732 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T162734\_20210413T162833\_D001 CS OFFL SIR LRM 1B 20210413T162836 20210413T163358 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T164908\_20210413T165439\_D001 CS OFFL SIR LRM 1B 20210413T165609 20210413T165924 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T165926\_20210413T165934\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T165937\_20210413T172305\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T173623\_20210413T180155\_D001 CS OFFL SIR LRM 1B 20210413T180348 20210413T181033 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T181033\_20210413T181208 D001 CS OFFL SIR LRM 1B 20210413T183335 20210413T183408 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T191520\_20210413T194415\_D001 CS OFFL SIR LRM 1B 20210413T194517 20210413T194557 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T194611\_20210413T194725\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T194804\_20210413T194955\_D001 CS OFFL SIR LRM 1B 20210413T195145 20210413T195326 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T200648\_20210413T204046\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T204659\_20210413T205222\_D001 CS OFFL SIR LRM 1B 20210413T210305 20210413T210636 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210413T210758\_20210413T211242\_D001

Loss of echo l oss of echo Loss of echo l oss of echo Loss of echo l oss of echo Loss of echo l oss of echo Loss of echo

The tracking echo is missing for one or more records The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20210413T211303_20210413T211500_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T211618_20210413T211804_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T212435_20210413T212509_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T212546_20210413T212553_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T212625_20210413T212658_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T212917_20210413T212932_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T225613_20210413T230040_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T232239_20210413T232352_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T232354_20210413T232357_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210413T232359_20210413T232406_D001	Loss of echo	The tracking echo is missing for one or more records

### 4.5 L1B Calibration Usage Check

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

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Number of products with errors:

#### 4.6 L1B 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:

#### 4.7 L1B 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:

#### 4.8 L1B 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.

Currently, there are several common error flags raised in the Level 1B products which are expected due to operational mode or surface type. All common flags are summarised in the list below, followed by a table of any additional issues arising from this test.

Block Degraded Flag: This flag is currently set for a number of individual records generally at the start or end of products (all modes), but this is to be expected.

Phase Perturbation Flag: This flag is currently set for all L1B SARIn products, indicating that the ADC correction application is deactivated, but this is in line with the current configuration. Number of products with errors: 1

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20210413T211303_20210413T211500_D001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo

# 5. Level 2 Data Quality Check

#### 5.1 L2 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 product file (.DBL).

Number of products with errors:

#### 5.2 L2 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: 0

#### 5.3 L2 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:

#### 5.4 L2 Auxiliary Correction Error Check

CryoSat L2 data includes a correction error flag (field 30) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

### 5.5 L2 Measurement Quality Flag Check

CryoSat L2 data includes a quality flag (field 50) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Currently, there are several common error flags raised in the Level 2 products which are expected due to operational mode or surface type. All common flags are summarised in the list below, followed by a table of any additional issues arising from this test.

Freeboard error: This flag is correctly set in all L2 SAR products that are not discriminated as sea-ice, and for which freeboard cannot be calculated.

Height and Backscatter errors: These flags are currently set for products over land, but this is to be expected. Retracker 1 Height and Backscatter error flags are also set for products over sea-ice, but this is to be expected.

Peakiness error: This flag is currently set for products over sea-ice, but this is to be expected.

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SARIN X-Track Angle Error: This flag is set when the difference between the computed surface elevation and the DEM is >50 m. The DEM is only available over Greenland and Antarctica and as a result this flag is set for L2 SARIn products in all other locations as expected.

SSHA interpolation error: This flag is currently set for a number of SAR products occurring at surface type boundaries, but this is to be expected.

Number of products with errors:

Product	Test Failed	Description
CS OFFL SIR LRM 2 202104121235921 202104131000015 D001		There is a height and backscatter error for Retracker 2 for one or more records

CS_OFFL_SIR_LRM_220210413T001702_20210413T003151_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T003630_20210413T004238_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T004305_20210413T004920_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T010735_20210413T012001_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T020020_20210413T021103_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T021306_20210413T022830_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T024414_20210413T024919_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T024944_20210413T025606_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T030150_20210413T031318_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T031550_20210413T031723_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210413T033558_20210413T034223_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210413T035227_20210413T040728_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T042100_20210413T044800_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T051621_20210413T051647_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210413T052134_20210413T054149_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T054241_20210413T054655_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210413T060016_20210413T062740_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T065949_20210413T072649_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T074007_20210413T081447_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 , a height error for Retracker 3 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210413T082808_20210413T082920_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T083412_20210413T083502_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T084920_20210413T085717_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T091936_20210413T094146_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T094432_20210413T095314_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T102548_20210413T104524_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T105841_20210413T113134_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T115727_20210413T122021_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T123849_20210413T125414_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records

CS_OFFL_SIR_LRM_220210413T125416_20210413T125608_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T130049_20210413T130905_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210413T132848_20210413T134454_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T134707_20210413T140148_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T141747_20210413T143313_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210413T143513_20210413T144434_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T151200_20210413T151933_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T151935_20210413T152245_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T152249_20210413T152408_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210413T152911_20210413T154350_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T155726_20210413T161422_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T161611_20210413T161844_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T162734_20210413T162833_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210413T162836_20210413T163358_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210413T165609_20210413T165924_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T165937_20210413T172305_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T173623_20210413T180155_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T183335_20210413T183408_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T183457_20210413T190144_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T191520_20210413T194415_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T195145_20210413T195326_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T200648_20210413T204046_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T211947_20210413T212047_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T213026_20210413T213403_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T214624_20210413T215503_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 , a height error for Retracker 3 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210413T215748_20210413T222010_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210413T223314_20210413T224620_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210413T224807_20210413T225248_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records

CS_OFFL_SIR_LRM_220210413T225613_20210413T230040_D001		There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
	<b>S</b>	There is a height and backscatter error for Retracker 2 for one or more records

# 6. 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	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_LRM_1B	170	170	170	0	0
SIR_SAR_1B	139	139	139	0	0
SIR_SIN_1B	100	100	100	0	0
SIR_LRM_2	170	170	164	6	0
SIR_SAR_2	100	139	139	0	0
SIR_SIN_2	139	100	98	2	0
SIR_GDR_2	14	14	0	0	14

## 6.1 QCC Errors

Number of products with QCC errors:

		14

Product Type	MPHDUTNCDF	MPHXPFNCDF	MPHXVFNCDF	MPHYPFNCDF	MPHYVFNCDF	MPHZPFNCDF	MPHZVFNCDF	STRUCTURESIZ EANDREAD	-	-	-
SIR_GDR_2_	14	14	14	14	14	14	14	14			
Test Descriptio											
Test Descriptio	n rey:										
Abbreviation	Test na	ime		Details	Details						
MPHDUTNCDF	MPH_De	elta_UT1_NetCDF		Delta_UT1 mismat	Delta_UT1 mismatch						
MPHXPFNCDF	MPHXPFNCDF MPH_X_Position_Float_v2_NetCDF X_Position mismatch (DBL float (GDR), rounded to 100)										
MPHXVFNCDF	MPH_X_	Velocity_Float_v2_	NetCDF	X_Velocity mismat	X_Velocity mismatch (DBL float (GDR), rounded to 1)						
MPHYPENCDE	MPH Y	Position Float v2	NetCDF	Y Position mismat	ch (DBL float (GDF	R), rounded to 100)					

Y\_velocity mismatch (DBL float (GDR), rounded to 100) Y\_Cosition mismatch (DBL float (GDR), rounded to 10) Z\_velocity mismatch (DBL float (GDR), rounded to 100) Z\_velocity mismatch (DBL float (GDR), rounded to 1) Under investigation. MPHYVFNCDF MPH\_Y\_Velocity\_Float\_v2\_NetCDF MPHZPFNCDF MPH\_Z\_Position\_Float\_v2\_NetCDF MPHZVFNCDF MPH\_Z\_Velocity\_Float\_v2\_NetCDF STRUCTURESIZEANDFSTRUCTURE\_SIZE\_AND\_READ

0

### 6.2 QCC Warnings

### Number of QCC reports with warnings

	rts with warnings	0		Total number of occu	rrences of each warning			
Product Type	AXDME	AXSMMEOCI	-	-	-	J  -	-	
SIR LRM 2	0	6						
SIR SIN 2	2	0						
		I.		I.	Ţ	1	Į.	
Test Description Key	:							
Abbreviation	Test name				Details			
AXDME	AttributeXrefDemMustExist				The xref_dem attribute is mandatory in SIN products over continental ice			
AXSMMEOCI	AttributeXrefSlopeModelMustExistOverContinentalIce				The xref_slope_model is mandatory in LRM products over continental ice			

### 6.2 Missing QCC Reports

Number of products with missing QCC reports: