

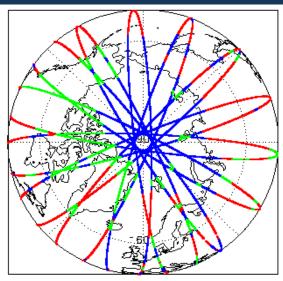
1. Overview

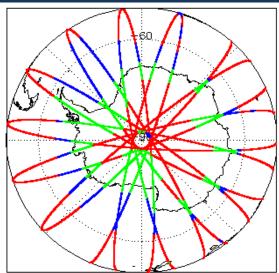
Report Production Date:	03-Jul-2020
Processor Used:	CryoSat Ice Processor
Data Used:	L1B and L2 OFFLINE Data

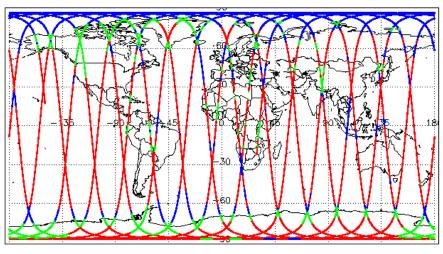
Check	Status		
Server check: science-pds.cryosat.esa.int	Nominal		
Server check: calval-pds.cryosat.esa.int	Nominal		
Product Software Check	Nominal		
Product Format Check	Nominal		
Product Header Analysis	Nominal		
Star Tracker Usage Check	Nominal		
L1B Tracking Flag Check	See Section 4.4		
L1B Calibration 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		

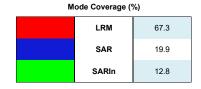
Mission / Instrument News						
04-Jun-2020	None					
05-Jun-2020	None					
06-Jun-2020	Nothing planned					

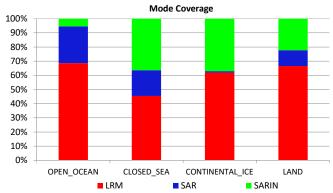
2. Global Coverage

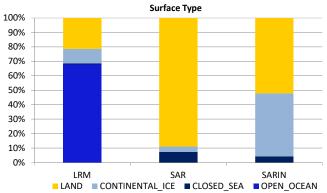












3. Instrument Configuration

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

SIRAL instrument(s) in use:

SIRAL - A

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:

0

4.3 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:

0

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.

lumber of products with errors:

95

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20200605T002451_20200605T002521_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T002809_20200605T003111_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T003113_20200605T003154_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T003211_20200605T003247_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T003830_20200605T004325_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T004346_20200605T004829_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T004843_20200605T005122_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T015207_20200605T015217_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T020951_20200605T021100_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T021110_20200605T021129_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T021138_20200605T021254_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T021338_20200605T021834_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T024537_20200605T024844_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T025540_20200605T030039_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T030043_20200605T032205_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T033011_20200605T033210_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T042557_20200605T042750_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T044052_20200605T045114_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T045117_20200605T045212_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T045349_20200605T050210_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T050529_20200605T051049_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T051052_20200605T051146_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T054311_20200605T054610_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T054717_20200605T055856_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T060440_20200605T060706_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T061424_20200605T062840_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T063020_20200605T064115_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T064117_20200605T064126_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T064128_20200605T064538_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T064611_20200605T065203_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T070713_20200605T071027_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T071546_20200605T072058_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T081624_20200605T081709_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T082054_20200605T082149_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T082320_20200605T082338_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T082341_20200605T082647_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T082833_20200605T082937_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T084423_20200605T085256_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T085258_20200605T085505_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T085509_20200605T091813_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T093305_20200605T095734_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T071546_20200605T072058_D001 CS_OFFL_SIR_LRM_1B_20200605T081624_20200605T081709_D001 CS_OFFL_SIR_LRM_1B_20200605T082054_20200605T082149_D001 CS_OFFL_SIR_LRM_1B_20200605T082320_20200605T082338_D001 CS_OFFL_SIR_LRM_1B_20200605T082341_20200605T082647_D001 CS_OFFL_SIR_LRM_1B_20200605T082833_20200605T082937_D001 CS_OFFL_SIR_LRM_1B_20200605T082833_20200605T085256_D001 CS_OFFL_SIR_LRM_1B_20200605T085258_20200605T085505_D001 CS_OFFL_SIR_LRM_1B_20200605T085509_20200605T091813_D001	Loss of echo	The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records 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_20200605T095739_20200605T095804_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T095807_20200605T100003_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T100005_20200605T100141_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T100206_20200605T100755_D001	Loss of echo	The tracking echo is missing for one or more records
CS OFFL SIR LRM 1B 20200605T102625 20200605T102856 D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T111123_20200605T112622_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T112625_20200605T112626_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T112628_20200605T113003_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T113006_20200605T113211_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T113236_20200605T113746_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T113915_20200605T114029_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T114208_20200605T114326_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T114400_20200605T114528_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T114749_20200605T114820_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T130239_20200605T130647_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T130711_20200605T131401_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T131544_20200605T131831_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T132120_20200605T132200_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T132235_20200605T132238_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T135347_20200605T141514_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T144405_20200605T145121_D001	Loss of echo	The tracking echo is missing for one or more records
CS OFFL SIR LRM 1B 20200605T151840 20200605T151935 D001	Loss of echo	The tracking echo is missing for one or more records
CS OFFL SIR LRM 1B 20200605T152215 20200605T155426 D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T161255_20200605T162525_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T165710_20200605T165951_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T170155_20200605T170328_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T170423_20200605T171618_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T171823_20200605T173331_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T175006_20200605T180031_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T180138_20200605T180355_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T180650_20200605T180816_D001	Loss of echo	The tracking echo is missing for one or more records
CS OFFL SIR LRM 1B 20200605T180819 20200605T181906 D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T181959_20200605T182141_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T183550_20200605T184933_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T192700_20200605T200023_D001	Loss of echo	The tracking echo is missing for one or more records
CS OFFL SIR LRM 1B 20200605T201431 20200605T202216 D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T202819_20200605T204927_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T210604_20200605T213232_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T213235_20200605T213417_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T213419_20200605T213446_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T213448_20200605T213451_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T215653_20200605T220110_D001	Loss of echo	The tracking echo is missing for one or more records
CS OFFL SIR LRM 1B 20200605T220214 20200605T220456 D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T220459_20200605T220514_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T220516_20200605T220527_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T220529_20200605T223143_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T233613_20200605T233852_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T233926_20200605T234006_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T234205_20200605T234227_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T234229_20200605T234307_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T234415_20200605T235227_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T235601_20200605T235717_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T235720_20200605T235731_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200605T235736_20200606T000204_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.

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:

0

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:

Product	Test Failed	Description	
CS_OFFL_SIR_LRM_1B_20200605T215653_20200605T220110_D001	IEcho error IRK 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:

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.

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:

Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2 for one or more CS_OFFL_SIR_LRM_2__20200604T233636_20200605T001024_D001 Error (Retracker 2) Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2 for one or more CS OFFL SIR LRM 2 20200605T002339 20200605T002436 D001 Error (Retracker 2) records Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2 for one or more CS OFFL SIR LRM 2 20200605T002451 20200605T002521 D001 Error (Retracker 2) ecords Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2 for one or more CS_OFFL_SIR_LRM_2__20200605T005358_20200605T010117_D001 Error (Retracker 2) records Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2 for one or more CS_OFFL_SIR_LRM_2__20200605T011622_20200605T013754_D001

Error (Retracker 2)

Height Error (Retracker 2), Height Error There is a height and backscatter error for Retracker 2 , a height error for CS_OFFL_SIR_LRM_2__20200605T014040_20200605T014952_D001 (Retracker 3), Backscatter Error Retracker 3 and no DEM or Slope Model was used for the location of one (Retracker 2), Surface model unavailable or more records

Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2 for one or more CS OFFL SIR LRM 2 20200605T020157 20200605T020616 D001 Error (Retracker 2) records Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2 for one or more

records

CS_OFFL_SIR_LRM_2__20200605T022206_20200605T022649_D001 Error (Retracker 2) records Height Error (Retracker 2), Height Error There is a height and backscatter error for Retracker 2 and a height error CS_OFFL_SIR_LRM_2__20200605T022837_20200605T023949_D001 (Retracker 3), Backscatter Error

for Retracker 3 for one or more records (Retracker 2) Height Error (Retracker 2), Height Error There is a height and backscatter error for Retracker 2 and a height error CS_OFFL_SIR_LRM_2__20200605T025540_20200605T030039_D001 (Retracker 3), Backscatter Error for Retracker 3 for one or more records (Retracker 2)

Height Error (Retracker 2), Height Error There is a height and backscatter error for Retracker 2 and a height error CS_OFFL_SIR_LRM_2__20200605T030043_20200605T032205_D001 (Retracker 3), Backscatter Error for Retracker 3 for one or more records (Retracker 2)

CS OFFL SIR LRM 2 20200605T032339 20200605T032843 D001	Height Error (Retracker 2), Backscatter	There is a height and backscatter error for Retracker 2 for one or more
CS_OFFL_SIR_LRM_2_20200605T034457_20200605T034419_D001	Error (Retracker 2) Height Error (Retracker 2), Backscatter	There is a height and backscatter error for Retracker 2 for one or more
	Error (Retracker 2) Height Error (Retracker 2), Backscatter	records There is a height and backscatter error for Retracker 2 for one or more
CS_OFFL_SIR_LRM_220200605T034504_20200605T035202_D001	Error (Retracker 2) Height Error (Retracker 2), Backscatter	records There is a height and backscatter error for Retracker 2 for one or more
CS_OFFL_SIR_LRM_220200605T035220_20200605T041623_D001	Error (Retracker 2)	records
CS_OFFL_SIR_LRM_220200605T044052_20200605T045114_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_220200605T045117_20200605T045212_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_220200605T045349_20200605T050210_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_220200605T052523_20200605T053903_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_220200605T054717_20200605T055856_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_220200605T061424_20200605T062840_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_220200605T063020_20200605T064115_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_220200605T070434_20200605T070551_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2_20200605T070713_20200605T071027_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_220200605T071033_20200605T071423_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_220200605T071546_20200605T072058_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_220200605T072250_20200605T073923_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_220200605T075341_20200605T081546_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_220200605T082833_20200605T082937_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_2_20200605T085509_20200605T091813_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_220200605T093305_20200605T095734_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_220200605T102625_20200605T102856_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_2_20200605T103022_20200605T105720_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_2_20200605T111123_20200605T112622_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_220200605T112628_20200605T113003_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_220200605T113236_20200605T113746_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_220200605T120211_20200605T123607_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_220200605T134219_20200605T135100_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_220200605T135347_20200605T141514_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_220200605T143030_20200605T144217_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_220200605T144405_20200605T145121_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_220200605T145208_20200605T145638_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_220200605T152215_20200605T155426_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_220200605T161255_20200605T162525_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_220200605T162536_20200605T164302_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records

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CS_OFFL_SIR_LRM_220200605T165710_20200605T165951_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records		
CS_OFFL_SIR_LRM_220200605T170423_20200605T171618_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_220200605T171823_20200605T173331_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_220200605T175006_20200605T180031_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_220200605T180819_20200605T181906_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_220200605T181959_20200605T182141_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records		
CS_OFFL_SIR_LRM_220200605T185820_20200605T191235_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_220200605T192700_20200605T200023_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_220200605T201431_20200605T202216_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more record		
CS_OFFL_SIR_LRM_220200605T202819_20200605T204927_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_220200605T210604_20200605T213232_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_220200605T213235_20200605T213417_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_220200605T220529_20200605T223143_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_220200605T224547_20200605T231957_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_220200605T234415_20200605T235227_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		

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			160	0	0
SIR SAR 1B	116	116	116	0	0
SIR SIN 1B	112	112	112	0	0
SIR_LRM_2	160	160	154	6	0
SIR SAR 2	112	116	116	0	0
SIR_SIN_2	116	112	108	4	0
SIR GDR 2	14	14	0	0	14

6.1 QCC Errors

 $\label{eq:number of products with QCC errors:} \\$

14

Product Type	MPHDUTNCDF	MPHXPFNCDF	MPHXVFNCDF	MPHYPFNCDF	MPHYVFNCDF	MPHZPFNCDF	MPHZVFNCDF	STRUCTURESIZ	-	-	-
SIR_GDR_2_	14	14	14	14	14	14	14	14			
							•		•		
Test Description	ı Key:										
Abbreviation	Test na	me		Details							
MPHDUTNCDF	MPH_De	lta_UT1_NetCDF		Delta_UT1 mismat	ch						
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 mismatch (DBL float (GDR), rounded to 1)							
MPHYPFNCDF	MPH_Y_	Position_Float_v2_	NetCDF	Y_Position mismatch (DBL float (GDR), rounded to 100)							
MPHYVFNCDF	MPH_Y_	Velocity_Float_v2_	NetCDF	Y_Velocity mismatch (DBL float (GDR), rounded to 1)							
MPHZPFNCDF	MPH_Z_	Position_Float_v2_	NetCDF	Z_Position mismatch (DBL float (GDR), rounded to 100)							
MPHZVFNCDF	MPH_Z_	Velocity_Float_v2_	NetCDF	Z_Velocity mismat	ch (DBL float (GDF	R), rounded to 1)					
STRUCTURESIZ	ZEANDRSTRUCT	URE_SIZE_AND_I	READ	Under investigation	n.						

6.2 QCC Warnings

Number of QCC reports with warnings

11

Total numb	er of occurrences	of e	ach warning

Product Type	AXDME	AXSMMEOCI	-	-	-	-	•
SIR_GDR_2_	0	1					
SIR_LRM_2_	0	6					
SIR_SIN_2_	4	0					

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