

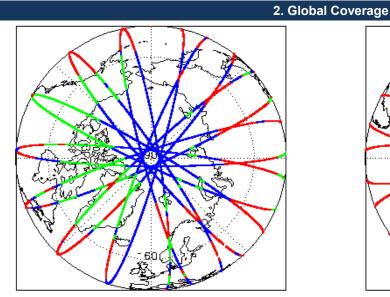
QA4EO Daily Report for OFFLINE data:

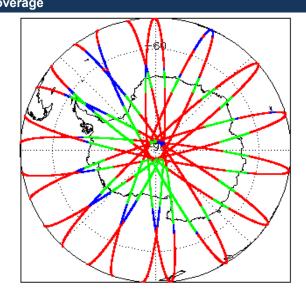
<u>17/03/2021</u>

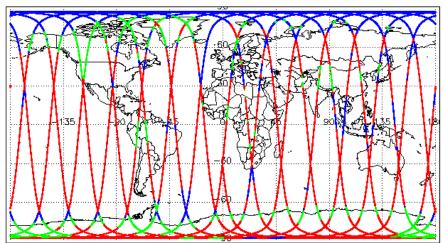
1. Overview

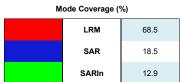
Banart Braduation Data	16 Apr 2021	Check	Status	
Report Production Date:	16-Apr-2021	Server check: science-pds.cryosat.esa.int	Nominal	
Processor Used:	CryoSat Ice Processor	Server check: calval-pds.cryosat.esa.int	Nominal	
	CryoSat ice Processor	Product Software Check	Nominal	
Data Used:	L1B and L2 OFFLINE Data	Product Format Check	Nominal	
	LIB and L2 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	

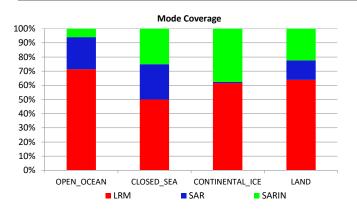
Mission / Instru	Mission / Instrument News					
16-Mar-2021	None					
17-Mar-2021	None					
18-Mar-2021	Nothing planned					

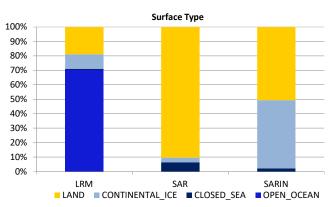












3. Instrument Configuration

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

SIRAL - A

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SIRAL instrument(s) in use:

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:

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20210317T000344_20210317T002605_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T003300_20210317T003711_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T012829_20210317T012843_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T012845_20210317T012936_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T013709_20210317T020500_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T021212_20210317T021433_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T022258_20210317T023525_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T030708_20210317T030715_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T030718_20210317T030725_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T030728_20210317T030757_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T030802_20210317T030830_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T030833_20210317T030835_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T030841_20210317T030903_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T030906_20210317T030952_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T030957_20210317T031006_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T031008_20210317T031045_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T031229_20210317T031306_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T031700_20210317T032621_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T032825_20210317T034412_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T035944_20210317T041020_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T041022_20210317T041212_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T041652_20210317T042835_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T042932_20210317T042947_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T043110_20210317T043234_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T044551_20210317T044912_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T044915_20210317T045005_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T045106_20210317T045132_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T045136_20210317T045930_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T053044_20210317T053158_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T053601_20210317T060325_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T060448_20210317T060534_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T060538_20210317T061107_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T062449_20210317T063052_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T063054_20210317T063140_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T063143_20210317T063204_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T063344_20210317T063442_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T063706_20210317T065745_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T071535_20210317T074427_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T080601_20210317T081341_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T081344_20210317T084216_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T084843_20210317T085211_D001	Loss of echo	The tracking echo is missing for one or more records

CS OFFL SIR LRM 1B 20210317T094316 20210317T094429 D001 CS OFFL SIR LRM 1B 20210317T094930 20210317T095014 D001 CS OFFL SIR LRM 1B 20210317T095201 20210317T095311 D001 CS_OFFL_SIR_LRM_1B_20210317T095554_20210317T100149_D001 CS OFFL SIR LRM 1B 20210317T100151 20210317T100229 D001 CS_OFFL_SIR_LRM_1B_20210317T100232_20210317T100401_D001 CS OFFL SIR LRM 1B 20210317T100405 20210317T100436 D001 CS OFFL SIR LRM 1B 20210317T100521 20210317T101236 D001 CS OFFL SIR LRM 1B 20210317T102340 20210317T102906 D001 CS OFFL SIR LRM 1B 20210317T112545 20210317T112605 D001 CS OFFL SIR LRM 1B 20210317T113226 20210317T113829 D001 CS_OFFL_SIR_LRM_1B_20210317T120303_20210317T120805_D001 CS_OFFL_SIR_LRM_1B_20210317T121318_20210317T124712_D001 CS_OFFL_SIR_LRM_1B_20210317T124947_20210317T125006_D001 CS OFFL SIR LRM 1B 20210317T125008 20210317T125013 D001 CS_OFFL_SIR_LRM_1B_20210317T125017_20210317T125027_D001 CS_OFFL_SIR_LRM_1B_20210317T125029_20210317T125034_D001 CS_OFFL_SIR_LRM_1B_20210317T125036_20210317T125057_D001 CS_OFFL_SIR_LRM_1B_20210317T134518_20210317T134710_D001 CS_OFFL_SIR_LRM_1B_20210317T135350_20210317T140604_D001 CS_OFFL_SIR_LRM_1B_20210317T140631_20210317T140917_D001 CS OFFL SIR LRM 1B 20210317T140920 20210317T140922 D001 CS OFFL SIR LRM 1B 20210317T140928 20210317T140944 D001 CS_OFFL_SIR_LRM_1B_20210317T140946_20210317T141131_D001 CS OFFL SIR LRM 1B 20210317T141612 20210317T142424 D001 CS_OFFL_SIR_LRM_1B_20210317T142750_20210317T142754_D001 CS OFFL SIR LRM 1B 20210317T142757 20210317T142806 D001 CS OFFL SIR LRM 1B 20210317T142812 20210317T142821 D001 CS OFFL SIR LRM 1B 20210317T142824 20210317T142851 D001 CS OFFL SIR LRM 1B 20210317T142856 20210317T142901 D001 CS OFFL SIR LRM 1B 20210317T142905 20210317T142925 D001 CS_OFFL_SIR_LRM_1B_20210317T142928_20210317T142930_D001 CS OFFL SIR LRM 1B 20210317T142934 20210317T142942 D001 CS_OFFL_SIR_LRM_1B_20210317T142945_20210317T143003_D001 CS OFFL SIR LRM 1B 20210317T143005 20210317T143020 D001 CS_OFFL_SIR_LRM_1B_20210317T143023_20210317T143026_D001 CS OFFL SIR LRM 1B 20210317T143028 20210317T143038 D001 CS_OFFL_SIR_LRM_1B_20210317T150227_20210317T151700_D001 CS_OFEL_SIR_LRM_1B_20210317T152415_20210317T152623_D001 CS OFFL SIR LRM 1B 20210317T153301 20210317T154537 D001 CS OFFL SIR LRM 1B 20210317T154625 20210317T154837 D001 CS OFFL SIR LRM 1B 20210317T155037 20210317T155958 D001 CS_OFFL_SIR_LRM_1B_20210317T160149_20210317T160452_D001 CS_OFFL_SIR_LRM_1B_20210317T160456_20210317T160459_D001 CS OFFL SIR LRM 1B 20210317T160502 20210317T160503 D001 CS_OFFL_SIR_LRM_1B_20210317T160505_20210317T160523_D001 CS OFFL SIR LRM 1B 20210317T160525 20210317T160537 D001 CS_OFFL_SIR_LRM_1B_20210317T160539_20210317T160542_D001 CS OFFL SIR LRM 1B 20210317T160546 20210317T160636 D001 CS_OFFL_SIR_LRM_1B_20210317T160648_20210317T160649_D001 CS_OFFL_SIR_LRM_1B_20210317T160652_20210317T161024_D001 CS_OFFL_SIR_LRM_1B_20210317T162721_20210317T162739_D001 CS OFFL SIR LRM 1B 20210317T162816 20210317T163749 D001 CS_OFFL_SIR_LRM_1B_20210317T163751_20210317T163928_D001 CS OFFL SIR LRM 1B 20210317T173612 20210317T173711 D001 CS_OFFL_SIR_LRM_1B_20210317T174059_20210317T174137_D001 CS OFFL SIR LRM 1B 20210317T174223 20210317T174242 D001 CS_OFFL_SIR_LRM_1B_20210317T174244_20210317T174319_D001 CS_OFFL_SIR_LRM_1B_20210317T174321_20210317T174403_D001 CS OFFL SIR LRM 1B 20210317T174405 20210317T174411 D001 CS_OFFL_SIR_LRM_1B_20210317T174413_20210317T174421_D001 CS_OFFL_SIR_LRM_1B_20210317T174425_20210317T174442_D001 CS OFFL SIR LRM 1B 20210317T174444 20210317T174456 D001 CS_OFFL_SIR_LRM_1B_20210317T174458_20210317T174919_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_20210317T180427_20210317T181021_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T181124_20210317T183836_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T184105_20210317T184305_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T191914_20210317T191945_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T191951_20210317T192607_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T192607_20210317T192716_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T194844_20210317T194844_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T194847_20210317T201718_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T203046_20210317T205924_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T205926_20210317T205935_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T210025_20210317T210252_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T221830_20210317T222159_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T222322_20210317T222809_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T222826_20210317T223326_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T223943_20210317T224048_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T224105_20210317T224132_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T224133_20210317T224213_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T224455_20210317T224509_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210317T230156_20210317T231023_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: 0

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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.

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:

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20210317T045136_20210317T045930_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
CS_OFFL_SIR_LRM_1B_20210317T071535_20210317T074427_D001	IE cho error I RK 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: 0

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_220210317T000344_20210317T002605_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_220210317T003910_20210317T010121_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_220210317T010203_20210317T010635_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_220210317T013709_20210317T020500_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_220210317T021212_20210317T021433_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_220210317T022258_20210317T023525_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_220210317T023624_20210317T025001_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_220210317T031700_20210317T032621_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_220210317T032825_20210317T034412_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_220210317T035944_20210317T041020_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_220210317T041652_20210317T042835_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_220210317T043110_20210317T043234_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210317T050747_20210317T052310_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_220210317T053601_20210317T060325_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_220210317T063706_20210317T065745_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_220210317T065836_20210317T070249_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_220210317T071535_20210317T074427_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_220210317T081344_20210317T084216_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_220210317T085523_20210317T093013_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_220210317T094316_20210317T094429_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_220210317T095201_20210317T095311_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_220210317T100521_20210317T101236_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_220210317T103411_20210317T105852_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_220210317T105953_20210317T110833_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_220210317T112355_20210317T112415_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_220210317T112545_20210317T112605_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_220210317T114112_20210317T120058_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_220210317T121318_20210317T124712_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_220210317T131245_20210317T133542_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_220210317T135350_20210317T140604_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_220210317T140631_20210317T140917_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_220210317T140946_20210317T141131_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_220210317T141612_20210317T142424_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_220210317T144353_20210317T150018_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_220210317T150227_20210317T151700_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_220210317T153301_20210317T154537_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_220210317T154625_20210317T154837_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_220210317T155037_20210317T155958_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_220210317T162428_20210317T162615_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210317T162816_20210317T163749_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_220210317T164444_20210317T165947_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_220210317T171223_20210317T172914_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_220210317T173156_20210317T173407_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_220210317T174059_20210317T174137_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210317T174244_20210317T174319_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210317T181124_20210317T183836_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_220210317T185139_20210317T191703_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_220210317T191951_20210317T192607_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210317T194847_20210317T201718_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_220210317T203046_20210317T205924_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_220210317T210712_20210317T210859_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_220210317T212216_20210317T215658_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_220210317T220915_20210317T221540_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_220210317T223510_20210317T223603_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_220210317T230156_20210317T231023_D001		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_220210317T231309_20210317T233617_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_220210317T234816_20210318T000324_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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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	190	190	190	0	0
SIR_SAR_1B	122	122	122	0	0
SIR_SIN_1B	97	97	97	0	0
SIR_LRM_2	190	190	184	6	0
SIR_SAR_2	97	119	119	0	0
SIR_SIN_2	119	97	97	0	0
SIR_GDR_2	14	14	0	0	14

6.1 QCC Errors

Number of products with QCC errors:

Product Type	MPHDUTNCDF	MPHXPFNCDF	MPHXVFNCDF	MPHYPFNCDF	MPHYVFNCDF	MPHZPFNCDF	MPHZVFNCDF	STRUCTURESIZ EANDREAD	-	-	-
SIR_GDR_2_	14	14	14	14	14	14	14	14			

14

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Fest Description Key:					
Abbreviation	Test name	Details			
MPHDUTNCDF	MPH_Delta_UT1_NetCDF	Delta_UT1 mismatch			
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 mismatch (DBL float (GDR), rounded to 1)			
STRUCTURESIZEANDESTRUCTURE_SIZE_AND_READ		Under investigation.			

6.2 QCC Warnings

Number of QCC reports with warnings

6 Total number of occurrences of each warning AXSMMEOCI Product Type SIR_LRM_2_ 0 Test Description Key: Abbreviation AXSMMEOCI Test name AttributeXrefSlopeModelMustExistOverContinentalIce Details The xref_slope_model is mandatory in LRM products over continental ice

6.2 Missing QCC Reports

Number of products with missing QCC reports: