

QA4EO Daily Report for OFFLINE data:

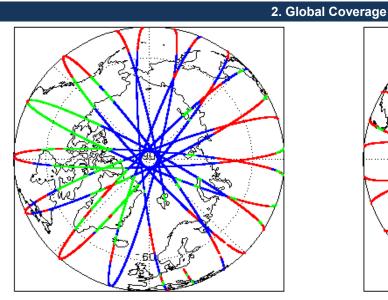
<u>16/02/2021</u>

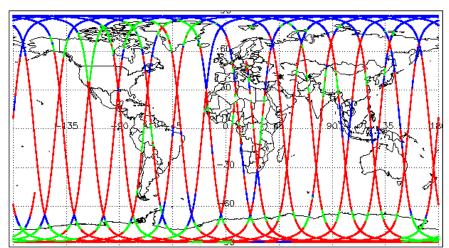
1. Overview

Demont Dreduction Dates	18-Mar-2021	Check	Status	
Report Production Date:	18-Mar-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	See Section 4.5	
		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 15-Feb-2021 None

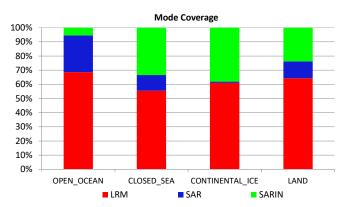
16-Feb-2021	SIRAL unavailability from 12:38:00 until 12:52:02
17-Feb-2021	Nothing planned

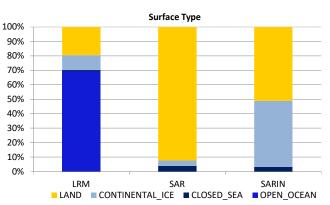




Mode Coverage (%)

SAR	20.2
SARIn	13.0





3. Instrument Configuration

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

SIRAL - A

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_20210216T003359_20210216T003625_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T003642_20210216T004116_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T004259_20210216T004541_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T004824_20210216T004941_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T010925_20210216T011812_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T012058_20210216T014318_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T021059_20210216T021839_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T023130_20210216T023219_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T024556_20210216T024604_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T024606_20210216T024649_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T025520_20210216T032213_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T032927_20210216T033158_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T034012_20210216T035242_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042424_20210216T042445_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042448_20210216T042514_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042520_20210216T042626_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042628_20210216T042629_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042633_20210216T042637_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042639_20210216T042640_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042643_20210216T042649_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042654_20210216T042704_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042708_20210216T042712_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042716_20210216T042719_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042721_20210216T042726_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T042959_20210216T043029_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T043031_20210216T043033_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T043354_20210216T044334_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T044537_20210216T050126_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T051711_20210216T052831_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T052834_20210216T052929_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T052950_20210216T053037_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T053409_20210216T054533_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T054542_20210216T054604_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T054707_20210216T054912_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T060306_20210216T060654_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T060656_20210216T060754_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T060756_20210216T060758_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T060800_20210216T060838_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T060840_20210216T060846_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T060848_20210216T060852_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T060854_20210216T060900_D001	Loss of echo	The tracking echo is missing for one or more records

CS OFFL SIR LRM 1B 20210216T060902 20210216T060906 D001 CS OFFL SIR LRM 1B 20210216T060908 20210216T061251 D001 CS OFFL SIR LRM 1B 20210216T061253 20210216T061646 D001 CS_OFFL_SIR_LRM_1B_20210216T065333_20210216T072052_D001 CS OFFL SIR LRM 1B 20210216T072104 20210216T072815 D001 CS_OFFL_SIR_LRM_1B_20210216T074155_20210216T074756_D001 CS OFFL SIR LRM 1B 20210216T074758 20210216T074806 D001 CS OFFL SIR LRM 1B 20210216T074808 20210216T074829 D001 CS OFFL SIR LRM 1B 20210216T074906 20210216T074908 D001 CS OFFL SIR LRM 1B 20210216T074911 20210216T074928 D001 CS OFFL SIR LRM 1B 20210216T075052 20210216T075150 D001 CS_OFFL_SIR_LRM_1B_20210216T075447_20210216T075518_D001 CS_OFFL_SIR_LRM_1B_20210216T075525_20210216T081559_D001 CS_OFFL_SIR_LRM_1B_20210216T083246_20210216T090031_D001 CS OFFL SIR LRM 1B 20210216T090033 20210216T090042 D001 CS_OFFL_SIR_LRM_1B_20210216T090044_20210216T090052_D001 CS_OFFL_SIR_LRM_1B_20210216T090054_20210216T090205_D001 CS_OFFL_SIR_LRM_1B_20210216T092257_20210216T092825_D001 CS_OFFL_SIR_LRM_1B_20210216T092931_20210216T095924_D001 CS_OFFL_SIR_LRM_1B_20210216T110333_20210216T110611_D001 CS_OFFL_SIR_LRM_1B_20210216T110916_20210216T110921_D001 CS_OFFL_SIR_LRM_1B_20210216T110924_20210216T110927_D001 CS OFFL SIR LRM 1B 20210216T110931 20210216T111012 D001 CS_OFFL_SIR_LRM_1B_20210216T111014_20210216T111026_D001 CS OFFL SIR LRM 1B 20210216T111206 20210216T111342 D001 CS_OFFL_SIR_LRM_1B_20210216T111448_20210216T111749_D001 CS_OFFL_SIR_LRM_1B_20210216T111928_20210216T111944_D001 CS_OFFL_SIR_LRM_1B_20210216T112318_20210216T112947_D001 CS OFFL SIR LRM 1B 20210216T114052 20210216T114623 D001 CS OFFL SIR LRM 1B 20210216T125202 20210216T125232 D001 CS OFFL SIR LRM 1B 20210216T132011 20210216T132520 D001 CS_OFFL_SIR_LRM_1B_20210216T133039_20210216T140504_D001 CS OFFL SIR LRM 1B 20210216T140706 20210216T140731 D001 CS_OFFL_SIR_LRM_1B_20210216T140735_20210216T140754_D001 CS OFFL SIR LRM 1B 20210216T151111 20210216T152438 D001 CS_OFFL_SIR_LRM_1B_20210216T152559_20210216T152848_D001 CS OFFL SIR LRM 1B 20210216T153329 20210216T154018 D001 CS_OFFL_SIR_LRM_1B_20210216T154020_20210216T154058_D001 CS_OFEL_SIR_LRM_1B_20210216T154523_20210216T154530_D001 CS OFFL SIR LRM 1B 20210216T154532 20210216T154546 D001 CS OFFL SIR LRM 1B 20210216T154550 20210216T154551 D001 CS OFFL SIR LRM 1B 20210216T154554 20210216T154555 D001 CS_OFFL_SIR_LRM_1B_20210216T154600_20210216T154607_D001 CS_OFFL_SIR_LRM_1B_20210216T154609_20210216T154618_D001 CS OFFL SIR LRM 1B 20210216T154625 20210216T154650 D001 CS_OFFL_SIR_LRM_1B_20210216T154654_20210216T154758_D001 CS OFFL SIR LRM 1B 20210216T161942 20210216T163357 D001 CS_OFFL_SIR_LRM_1B_20210216T164132_20210216T164337_D001 CS OFFL SIR LRM 1B 20210216T165016 20210216T170439 D001 CS_OFFL_SIR_LRM_1B_20210216T170756_20210216T171719_D001 CS_OFFL_SIR_LRM_1B_20210216T171946_20210216T172229_D001 CS_OFFL_SIR_LRM_1B_20210216T172234_20210216T172240_D001 CS_OFFL_SIR_LRM_1B_20210216T172243_20210216T172243_D001 CS_OFFL_SIR_LRM_1B_20210216T172245_20210216T172250_D001 CS OFFL SIR LRM 1B 20210216T172252 20210216T172255 D001 CS_OFFL_SIR_LRM_1B_20210216T172258_20210216T172303_D001 CS OFFL SIR LRM 1B 20210216T172306 20210216T172309 D001 CS_OFFL_SIR_LRM_1B_20210216T172311_20210216T172330_D001 CS_OFFL_SIR_LRM_1B_20210216T172334_20210216T172338_D001 CS OFFL SIR LRM 1B 20210216T172340 20210216T172408 D001 CS_OFFL_SIR_LRM_1B_20210216T172411_20210216T172415_D001 CS_OFFL_SIR_LRM_1B_20210216T172420_20210216T172551_D001 CS OFFL SIR LRM 1B 20210216T172555 20210216T172744 D001 CS_OFFL_SIR_LRM_1B_20210216T174210_20210216T174328_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 20210216T174526 20210216T175643 D001	Loss of echo	The tracking echo is missing for one or more records
CS OFFL SIR LRM 1B 20210216T181933 20210216T182742 D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T185236_20210216T185418_D001	Loss of echo	The tracking coho is missing for one or more records
CS OFFL SIR LRM 1B 20210216T185420 20210216T185442 D001	Loss of echo	The tracking echo is missing for one or more records
CS OFFL SIR LRM 1B 20210216T185824 20210216T185904 D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_ENM_1B_20210216T185934_20210216T185950_D001	Loss of echo	The tracking echo is missing for one or more records
	Loss of echo	
CS_OFFL_SIR_LRM_1B_20210216T185954_20210216T185956_D001		The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T185959_20210216T190002_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T190006_20210216T190012_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T190019_20210216T190107_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T190111_20210216T190115_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T190121_20210216T190127_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T190129_20210216T190140_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T190142_20210216T190211_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T190213_20210216T190227_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T190229_20210216T190656_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T192150_20210216T192822_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T192829_20210216T195550_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T200058_20210216T200622_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T200853_20210216T203413_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T203640_20210216T203640_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T203642_20210216T203650_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T203758_20210216T204339_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T204415_20210216T204454_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T210539_20210216T210548_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T210555_20210216T210616_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T210620_20210216T210721_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T210723_20210216T213430_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T214753_20210216T221552_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T221554_20210216T221608_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T221610_20210216T221724_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T221728_20210216T221733_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T221736_20210216T222010_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T233556_20210216T234504_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T234545_20210216T235043_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T235226_20210216T235322_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T235643_20210216T235805_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210216T235817_20210216T235847_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.

0

0

Number of products with errors: 1							
Product	Test Failed	Description					
CS_OFFL_SIR_SIN_1B_20210216T003355_20210216T003359_D001	Cal1 corr. missing	The Cal1 correction has not been applied					
4.6 L1B Auxilary Data File Usage Check							
Each product is checked for missing Data Set Descriptors with respect to a pre-dete	ermined baseline and also to check the val	dity 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_SIN_1B_20210216T003355_20210216T003359_D001	Cal1 Correction missing,	The Cal1 Correction has not been applied

5.1 L2 Product Format Check							
Each product, retrieved and unpacked from the science server, is checked to ensu	re it consists of both an XML header file (.F	IDR) and a product file (.DBL).					
Number of products with errors: 0							
5.2 L2 Product Header Analysis							
For all products, a series of pre-defined checks are carried out on the MPH and SF	PH in order to identify any inconsistencies a	nd/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-de	termined baseline and also to check the val	idity of Auxiliary Data Files is correct.					
Number of products with errors: 0							
5.4 L2 Auxiliary Correction Error Check							
CryoSat L2 data includes a correction error flag (field 30) for each measurement re	cord. The bit value of this flag indicates any	/ problems when set.					
Number of products with errors: 0							
5.5 L2 Measurement Quality Flag Check							
CryoSat L2 data includes a quality flag (field 50) for each 20-Hz measurement reco	rd. The bit value of this flag indicates any p	roblems when set.					
Currently, there are several common error flags raised in the Level 2 product below, followed by a table of any additional issues arising from this test.	s which are expected due to operationa	I mode or surface type. All common flags are summarised in the list					
Freeboard error: This flag is correctly set in all L2 SAR products that are not discr	iminated as sea-ice, and for which freeboar	rd cannot be calculated.					
Height and Backscatter errors: These flags are currently set for products over la this is to be expected.	nd, but this is to be expected. Retracker 1 I	Height and Backscatter error flags are also set for products over sea-ice, but					
Peakiness error: This flag is currently set for products over sea-ice, but this is to be							
SARIN X-Track Angle Error: This flag is set when the difference between the con result this flag is set for L2 SARIN products in all other locations as expected.	nputed surface elevation and the DEM is >5	0 m. The DEM is only available over Greenland and Antarctica and as a					
SSHA interpolation error: This flag is currently set for a number of SAR products	occurring at surface type boundaries, but t	his is to be expected.					
Number of products with errors: 51							
Product	Test Failed	Description					
CS_OFFL_SIR_LRM_220210216T001659_20210216T002006_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_220210216T002207_20210216T002556_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_220210216T003206_20210216T003355_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_220210216T003359_20210216T003625_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_220210216T010925_20210216T011812_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_220210216T012058_20210216T014318_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_220210216T015636_20210216T020934_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_220210216T021059_20210216T021839_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_220210216T021934_20210216T022340_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_220210216T023130_20210216T023219_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_220210216T025520_20210216T032213_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_220210216T034012_20210216T035242_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_220210216T035315_20210216T041025_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_220210216T042448_20210216T042514_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records					
CS_OFFL_SIR_LRM_220210216T043354_20210216T044334_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_220210216T044537_20210216T050126_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_220210216T051711_20210216T052831_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_220210216T053409_20210216T054533_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_220210216T054707_20210216T054912_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210216T062501_20210216T064007_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_220210216T065333_20210216T072052_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_220210216T075525_20210216T081559_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_220210216T083246_20210216T090031_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_220210216T092931_20210216T095924_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_220210216T101235_20210216T104732_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_220210216T111206_20210216T111342_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_220210216T114052_20210216T114623_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210216T115151_20210216T122548_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_220210216T125842_20210216T131802_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_220210216T133039_20210216T140504_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_220210216T143013_20210216T143443_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_220210216T143515_20210216T145255_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_220210216T151111_20210216T152438_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_220210216T152559_20210216T152848_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_220210216T153329_20210216T154018_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_220210216T154654_20210216T154758_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210216T160037_20210216T161755_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_220210216T161942_20210216T163357_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_220210216T165016_20210216T170439_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_220210216T170756_20210216T171719_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_220210216T174526_20210216T175643_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_220210216T180221_20210216T181030_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_220210216T182935_20210216T184534_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_220210216T192829_20210216T195550_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_220210216T200853_20210216T203413_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_220210216T210620_20210216T210721_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_0FFL_SIR_LRM_220210216T210723_20210216T213430_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_220210216T214753_20210216T221552_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_220210216T222434_20210216T222554_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_220210216T223950_20210216T231343_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_SIN_2_20210216T003355_20210216T003359_D001	Calibration Warning	The Calibration correction is missing or has been taken from the IPFDB instead of the Calibration products 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	207	207	207	0	0
SIR_SAR_1B	128	128	128	0	0
SIR_SIN_1B	109	109	109	0	0
SIR_LRM_2	207	207	206	1	0
SIR_SAR_2	109	125	125	0	0
SIR_SIN_2	125	109	105	4	0
SIR_GDR_2	15	15	0	0	15

6.1 QCC Errors

Number of products with QCC errors:

Product Type	MPHDUTNCDF	MPHXPFNCDF	MPHXVFNCDF	MPHYPFNCDF	MPHYVFNCDF	MPHZPFNCDF	MPHZVFNCDF	STRUCTURESIZ EANDREAD	•	-	-
SIR_GDR_2_	15	15	15	15	15	15	15	15			
0											

15

5

0

Test 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)				
STRUCTURESIZEANDF	STRUCTURE_SIZE_AND_READ	Under investigation.				

6.2 QCC Warnings

Number of QCC reports with warnings

Total number of occurrences of each warning									
Product Type	AXDME	AXSMMEOCI	-	-	-	-	-		
SIR_LRM_2_	0	1							
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

Number of products with missing QCC reports: