

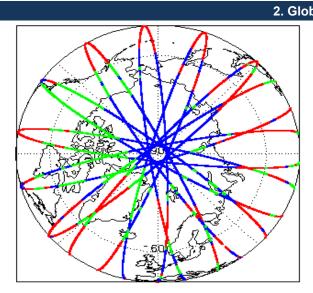
# **QA4EO Daily Report for OFFLINE data:**

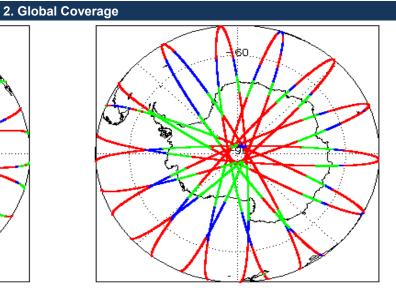
<u>18/05/2021</u>

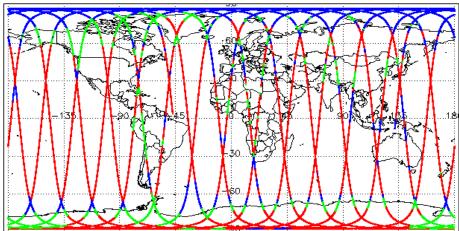
Report Production Date:	17-Jun-2021	Check	Status	
Report Production Date.	17-Juli-2021	Server check: science-pds.cryosat.esa.int	Nominal	
Processor Used:	CryoSat Ice Processor	Server check: calval-pds.cryosat.esa.int	Nominal	
Processor used.	CryoSat ice Processor	Product Software Check	Nominal	
Data Used:	L1B and L2 OFFLINE Data	Product Format Check	Nominal	
Data Oseu.	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	

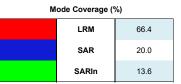
1. Overview

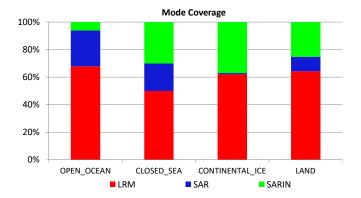
Mission / In	Mission / Instrument News					
17-May-20	1 None					
18-May-20	None 1					
19-May-20	Nothing planned					

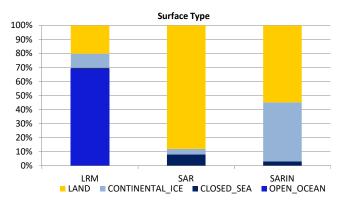












3. Instrument Configuration

SIRAL - A

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

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: 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. 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_20210518T002855_20210518T002958_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T003000_20210518T003448_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T003836_20210518T004807_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T005042_20210518T010456_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T012526_20210518T012844_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T013831_20210518T013903_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T013905_20210518T014012_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T014017_20210518T014019_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T014022_20210518T014254_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T014652_20210518T014807_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T014824_20210518T015130_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T020738_20210518T021245_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T021247_20210518T021651_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T021958_20210518T022109_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T024725_20210518T025153_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T025215_20210518T025351_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T025832_20210518T032155_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T032157_20210518T032309_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T032311_20210518T033251_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T035007_20210518T035325_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T035348_20210518T035424_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T035427_20210518T035430_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T035814_20210518T042332_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T043115_20210518T043440_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T050642_20210518T050952_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T052740_20210518T053244_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T053334_20210518T060326_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T061013_20210518T061347_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T061733_20210518T065121_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T070433_20210518T070613_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T070848_20210518T071241_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T071305_20210518T071336_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T071922_20210518T072415_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T072434_20210518T072920_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T073026_20210518T073250_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T073254_20210518T073316_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T074516_20210518T075037_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T085030_20210518T085040_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T085050_20210518T085208_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T085219_20210518T085224_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210518T085236_20210518T085254_D001	Loss of echo	The tracking echo is missing for one or more records

CS OFFL SIR LRM 1B 20210518T085423 20210518T085926 D001 CS OFFL SIR LRM 1B 20210518T092559 20210518T092937 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T093633\_20210518T094139\_D001 CS OFFL SIR LRM 1B 20210518T094148 20210518T100948 D001 CS OFFL SIR LRM 1B 20210518T101112 20210518T101306 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T110651\_20210518T110844\_D001 CS OFFL SIR LRM 1B 20210518T112231 20210518T112817 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T113057\_20210518T113146\_D001 CS OFFL SIR LRM 1B 20210518T113148 20210518T113309 D001 CS OFFL SIR LRM 1B 20210518T113749 20210518T114431 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T114619\_20210518T115044\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T115047\_20210518T115201\_D001 CS OFFL SIR LRM 1B 20210518T115205 20210518T115210 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T115214\_20210518T115231\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T121250\_20210518T122151\_D001 CS OFFL SIR LRM 1B 20210518T122404 20210518T122704 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T122810\_20210518T123947\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T130251\_20210518T130938\_D001 CS OFFL SIR LRM 1B 20210518T131118 20210518T131227 D001 CS OFFL SIR LRM 1B 20210518T131231 20210518T132629 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T132631\_20210518T132648\_D001 CS OFFL SIR LRM 1B 20210518T132724 20210518T133223 D001 CS OFFL SIR LRM 1B 20210518T133229 20210518T133305 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T134810\_20210518T135123\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T135642\_20210518T135923\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T135926\_20210518T140127\_D001 CS OFFL SIR LRM 1B 20210518T142325 20210518T143205 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T150201\_20210518T150254\_D001 CS OFFL SIR LRM 1B 20210518T150418 20210518T150419 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T150421\_20210518T150422\_D001 CS OFFL SIR LRM 1B 20210518T150425 20210518T150446 D001 CS OFFL SIR LRM 1B 20210518T150457 20210518T150745 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T150753\_20210518T151042\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T152522\_20210518T155913\_D001 CS OFFL SIR LRM 1B 20210518T161830 20210518T163841 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T163846\_20210518T164028\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T164031\_20210518T164042\_D001 CS OFFL SIR LRM 1B 20210518T164044 20210518T164243 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T164349\_20210518T164657\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T164658\_20210518T164859\_D001 CS OFFL SIR LRM 1B 20210518T170924 20210518T171000 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T175226\_20210518T181419\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T181421\_20210518T181721\_D001 CS OFFL SIR LRM 1B 20210518T181724 20210518T181932 D001 CS OFFL SIR LRM 1B 20210518T182018 20210518T182126 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T182854\_20210518T182923\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T192355\_20210518T192912\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T194100\_20210518T194124\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T194128\_20210518T194802\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T194834\_20210518T195135\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T195319\_20210518T195505\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T195648\_20210518T195827\_D001 CS OFFL SIR LRM 1B 20210518T200318 20210518T200323 D001 CS OFFL SIR LRM 1B 20210518T200323 20210518T200341 D001 CS OFFL SIR LRM 1B 20210518T203446 20210518T205620 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T212507\_20210518T213218\_D001 CS OFFL SIR LRM 1B 20210518T213302 20210518T213743 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T215941\_20210518T215955\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T215957\_20210518T220046\_D001 CS OFFL SIR LRM 1B 20210518T220255 20210518T223524 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T233813\_20210518T233914\_D001 CS OFFL SIR LRM 1B 20210518T233918 20210518T233955 D001 CS OFFL SIR LRM 1B 20210518T234000 20210518T234001 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T234003\_20210518T234046\_D001 CS OFFL SIR LRM 1B 20210518T234303 20210518T234439 D001 CS\_OFFL\_SIR\_LRM\_1B\_20210518T234447\_20210518T235718\_D001

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

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Each product is checked in order to ensure that the necessary calibration files Number of products with errors: 1	have been used in processing.	
Product CS_OFFL_SIR_SIN_1B_20210518T194125_20210518T194128_D001	Cal1 corr. missing	Description 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	e-determined baseline and also to check the v	alidity of Auxiliary Data Files is correct.
Number of products with errors: 0		
4.7 L1B Auxiliary Correction Error Check		
CryoSat L1B data includes a correction error flag (field 54) for each measurem Number of products with errors: 0	ent record. The bit value of this flag indicates	any problems when set.
4.8 L1B Measurement Confidence Data Check		
CryoSat L1B data includes a measurement confidence flag (field 18) for each r	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 pribelow, followed by a table of any additional issues arising from this test.		onal mode or surface type. All common flags are summarised in the list
Block Degraded Flag: This flag is currently set for a number of individual reco	ords 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           Number of products with errors:         1	s, indicating that the ADC correction application	n is deactivated, but this is in line with the current configuration.
Product	Test Failed	Description
CS_OFFL_SIR_SIN_1B_20210518T194125_20210518T194128_D001	Cal1 Correction missing,	The Cal1 Correction has not been applied
5.	Level 2 Data Quality Chec	sk
5.1 L2 Product Format Check		
Each product, retrieved and unpacked from the science server, is checked to e	ensure it consists of both an XML header file (	.HDR) 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 Number of products with errors: 0	d SPH in order to identify any inconsistencies	and/or errors raised by the ground-segment processing chain.
5.3 L2 Auxiliary Data File Usage Check		
Each product is checked for missing Data Set Descriptors with respect to a pre	a determined baseline and also to check the v	validity of Auviliany 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	nt record. The bit value of this flag indicates a	ny 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	record. The bit value of this flag indicates any	problems when set.
Currently, there are several common error flags raised in the Level 2 proceed below, followed by a table of any additional issues arising from this test.		al 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 of	discriminated as sea-ice, and for which freebo	ard cannot be calculated.
Height and Backscatter errors: These flags are currently set for products over this is to be expected.	er land, but this is to be expected. Retracker <sup>2</sup>	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	s to be expected.	
SARIN X-Track Angle Error: This flag is set when the difference between the result this flag is set for L2 SARIn products in all other locations as expected.	computed surface elevation and the DEM is	>50 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 prod	lucts occurring at surface type boundaries, bu	t this is to be expected.
Number of products with errors: 66		
Product	Test Failed	Description
CS_OFFL_SIR_LRM_220210517T235916_20210518T001312_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_220210518T001335_20210518T001630_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_220210518T003000_20210518T003448_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records

CS\_OFFL\_SIR\_LRM\_2\_\_20210518T003836\_20210518T004807\_D001

CS\_OFFL\_SIR\_LRM\_2\_20210518T005042\_20210518T010456\_D001 Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter error for Retracker 2 for one or more records

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_220210518T014022_20210518T014254_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_220210518T014417_20210518T014643_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_220210518T014652_20210518T014807_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_220210518T021247_20210518T021651_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210518T022748_20210518T024352_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_220210518T025832_20210518T032155_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_220210518T035814_20210518T042332_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_220210518T043806_20210518T050517_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_220210518T050642_20210518T050952_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_220210518T053334_20210518T060326_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_220210518T061733_20210518T065121_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_220210518T065124_20210518T065127_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_220210518T070433_20210518T070613_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_220210518T075712_20210518T081849_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_220210518T082135_20210518T083040_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_220210518T085236_20210518T085254_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_220210518T090255_20210518T090741_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_220210518T090928_20210518T092050_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_220210518T093633_20210518T094139_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_220210518T094148_20210518T100948_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_220210518T102601_20210518T105717_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_220210518T112231_20210518T112817_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_220210518T113148_20210518T113309_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_220210518T113749_20210518T114431_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_220210518T115047_20210518T115201_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210518T120625_20210518T121209_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_220210518T121250_20210518T122151_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_220210518T122810_20210518T123947_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_220210518T130251_20210518T130938_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_0FFL_SIR_LRM_220210518T131231_20210518T132629_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_220210518T134543_20210518T134648_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210518T134810_20210518T135123_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_220210518T135254_20210518T135519_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_220210518T135642_20210518T135923_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_220210518T135926_20210518T140127_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_220210518T140422_20210518T142017_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_220210518T143437_20210518T145700_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_220210518T152522_20210518T155913_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_220210518T161404_20210518T161827_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_220210518T161830_20210518T163841_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_220210518T163846_20210518T164028_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210518T170924_20210518T171000_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_220210518T171120_20210518T173810_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_220210518T175226_20210518T181419_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_220210518T181421_20210518T181721_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_220210518T181724_20210518T181932_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_220210518T182854_20210518T182923_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_220210518T184313_20210518T191707_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_220210518T195648_20210518T195827_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_220210518T200644_20210518T201044_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_220210518T202314_20210518T203200_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_220210518T203446_20210518T205620_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_220210518T211128_20210518T212319_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_220210518T212507_20210518T213218_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_0FFL_SIR_LRM_220210518T213302_20210518T213743_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_220210518T220255_20210518T223524_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_0FFL_SIR_LRM_220210518T225358_20210518T232411_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_220210518T233813_20210518T233914_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records

CS_OFFL_SIR_LRM_220210518T234303_20210518T234439_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_220210518T234447_20210518T235718_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_SIN_220210518T194125_20210518T194128_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	169	169	169	0	0
SIR_SAR_1B	138	138	138	0	0
SIR_SIN_1B	117	117	117	0	0
SIR_LRM_2	169	169	164	5	0
SIR_SAR_2	117	138	138	0	0
SIR_SIN_2	138	117	115	2	0
SIR_GDR_2	14	14	0	0	14

## 6.1 QCC Errors

Number of products with QCC errors:

14

7

Product Type	MPHDUTNCDF	MPHXPFNCDF	MPHXVFNCDF	MPHYPFNCDF	MPHYVFNCDF	MPHZPFNCDF	MPHZVFNCDF	STRUCTURESIZ EANDREAD	-	-	-
SIR_GDR_2_	14	14	14	14	14	14	14	14			
Test Description Key:											
Abbreviation	Test na	me		Details							
MPHDUTNCDF	MPH_De	lta_UT1_NetCDF		Delta_UT1 mismat	tch						
MPHXPFNCDF	MPH_X_	Position_Float_v2_	NetCDF	X Position mismatch (DBL float (GDR), rounded to 100)							
MPHXVFNCDF	MPH_X_	Velocity_Float_v2_	NetCDF	X_Velocity mismat	tch (DBL float (GDF	R), rounded to 1)					
MPHYPFNCDF	MPH_Y_	Position_Float_v2_	NetCDF	Y_Position mismat	tch (DBL float (GDF	R), 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 mismat	tch (DBL float (GDF	R), rounded to 100)					
MPHZVFNCDF	MPH_Z_	Velocity_Float_v2_	NetCDF	Z_Velocity mismat	ch (DBL float (GDF	R), rounded to 1)					
STRUCTURESIZ	ZEANDESTRUCT	URE_SIZE_AND_F	READ	Under investigatio	n.						

## 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	5						
SIR_SIN_2_	2	0						
						'		
Test Description Key:								
Abbreviation	Test name			Details				
AXDME	AttributeXrefDemMustExist	t		The xref_dem attribute is mandatory in SIN products over continental ice				
AXSMMEOCI	AttributeXrefSlopeModelMu	ustExistOverContinentalIce		The xref_slope_model is m	andatory in LRM products ov	ver continental ice		
				I				

## 6.2 Missing QCC Reports

Number of products with missing QCC reports: 1

Product name CS\_OFFL\_SIR\_GDR\_2\_20210518T230738\_20210519T004653\_D002