

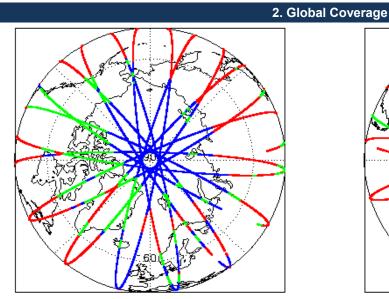
QA4EO Daily Report for OFFLINE data:

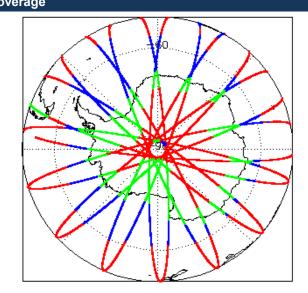
<u>04/11/2020</u>

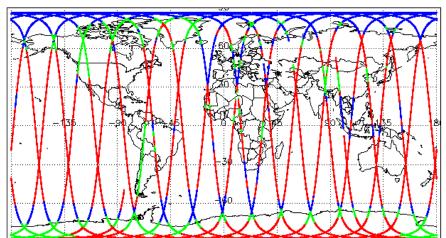
1. Overview

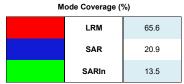
Report Production Date:	03-Dec-2020	Check	Status	
Report Production Date.	03-Dec-2020	Server check: science-pds.cryosat.esa.int	Nominal	
Processor Used:	CriveSet les Dressesser	Server check: calval-pds.cryosat.esa.int	Nominal	
	CryoSat Ice Processor	Product Software Check	Nominal	
Data Used:		Product Format Check	Nominal	
Data Oseu.	L1B 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	

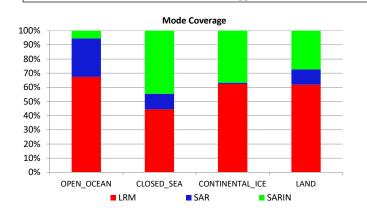
Mission / Instru	Mission / Instrument News				
03-Nov-2020	None				
04-Nov-2020	None				
05-Nov-2020	SIRAL unavailabiliity on the 05/11/2020 13:28:24 to 13:34:01 due to MMFU packet store recovery				

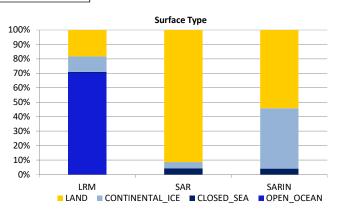












3. Instrument Configuration

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

SIRAL instrument(s) in use:

SIRAL - A

4. Level 1B Data Quality Check

4.1 L1B Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a product file (.DBL).

Number of products with errors:

4.2 L1B Product Header Analysis

For all products, a series of pre-defined checks are carried out on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. Number of products with errors:

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.

150

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20201104T004134_20201104T004156_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T004808_20201104T004820_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T004823_20201104T004857_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T004901_20201104T005128_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T010911_20201104T014232_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T015839_20201104T022419_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T022422_20201104T022428_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T022431_20201104T022440_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T022442_20201104T022448_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T022739_20201104T023046_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T023046_20201104T023253_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T025303_20201104T025344_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T033754_20201104T035708_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T035729_20201104T040311_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T040408_20201104T040414_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T040416_20201104T040517_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T041223_20201104T041313_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T052532_20201104T053150_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T053219_20201104T053526_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T054037_20201104T054220_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T054711_20201104T054714_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T054714_20201104T054731_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T061835_20201104T063954_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T070859_20201104T071613_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T071655_20201104T072133_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T074328_20201104T074329_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T074333_20201104T074338_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T074342_20201104T074356_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T074358_20201104T081845_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T092151_20201104T092224_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T092227_20201104T092232_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T092240_20201104T092253_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T092257_20201104T092339_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T092342_20201104T092358_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T092401_20201104T092406_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T092409_20201104T092453_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T092457_20201104T092518_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T092520_20201104T092658_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T092701_20201104T092826_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T092846_20201104T094109_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T094313_20201104T095826_D001	Loss of echo	The tracking echo is missing for one or more records

CS OFFL SIR LRM 1B 20201104T101507 20201104T102528 D001 CS OFFL SIR LRM 1B 20201104T102634 20201104T102859 D001 CS OFFL SIR LRM 1B 20201104T103147 20201104T104752 D001 CS_OFFL_SIR_LRM_1B_20201104T110044_20201104T110348_D001 CS OFFL SIR LRM 1B 20201104T110350 20201104T110515 D001 CS_OFFL_SIR_LRM_1B_20201104T110517_20201104T110538_D001 CS OFFL SIR LRM 1B 20201104T110540 20201104T110544 D001 CS OFFL SIR LRM 1B 20201104T110546 20201104T110905 D001 CS_OFFL_SIR_LRM_1B_20201104T110907 20201104T110908 D001 CS OFFL SIR LRM 1B 20201104T110910 20201104T111426 D001 CS OFFL SIR LRM 1B 20201104T115242 20201104T121417 D001 CS_OFFL_SIR_LRM_1B_20201104T121419_20201104T122610_D001 CS OFFL SIR LRM 1B 20201104T123921 20201104T124626 D001 CS_OFFL_SIR_LRM_1B_20201104T124629_20201104T124712_D001 CS OFFL SIR LRM 1B 20201104T124821 20201104T124909 D001 CS_OFFL_SIR_LRM_1B_20201104T125312_20201104T131444_D001 CS_OFFL_SIR_LRM_1B_20201104T132045_20201104T132416_D001 CS_OFFL_SIR_LRM_1B_20201104T132438_20201104T132807_D001 CS_OFFL_SIR_LRM_1B_20201104T133135_20201104T135703_D001 CS_OFFL_SIR_LRM_1B_20201104T135706_20201104T135853_D001 CS_OFFL_SIR_LRM_1B_20201104T135900_20201104T135910_D001 CS_OFFL_SIR_LRM_1B_20201104T135912_20201104T135924_D001 CS OFFL SIR LRM 1B 20201104T135929 20201104T135937 D001 CS_OFFL_SIR_LRM_1B_20201104T135940_20201104T135945 D001 CS OFFL SIR LRM 1B 20201104T142155 20201104T145502 D001 CS_OFFL_SIR_LRM_1B_20201104T150338_20201104T150706_D001 CS_OFFL_SIR_LRM_1B_20201104T160053_20201104T160348_D001 CS OFFL SIR LRM 1B 20201104T160421 20201104T160506 D001 CS OFFL SIR LRM 1B 20201104T160705 20201104T160803 D001 CS OFFL SIR LRM 1B 20201104T160818 20201104T161029 D001 CS OFFL SIR LRM 1B 20201104T161031 20201104T161722 D001 CS_OFFL_SIR_LRM_1B_20201104T162056_20201104T162643_D001 CS OFFL SIR LRM 1B 20201104T163828 20201104T164403 D001 CS_OFFL_SIR_LRM_1B_20201104T174253_20201104T174324_D001 CS OFFL SIR LRM 1B 20201104T174347 20201104T174359 D001 CS_OFFL_SIR_LRM_1B_20201104T174410_20201104T174416_D001 CS OFFL SIR LRM 1B 20201104T174825 20201104T175007 D001 CS_OFFL_SIR_LRM_1B_20201104T175150_20201104T175516_D001 CS_OFEL_SIR_LRM_1B_20201104T182959_20201104T190437_D001 CS OFFL SIR LRM 1B 20201104T190439 20201104T190452 D001 CS OFFL SIR LRM 1B 20201104T190454 20201104T190521 D001 CS OFFL SIR LRM 1B 20201104T190525 20201104T190537 D001 CS_OFFL_SIR_LRM_1B_20201104T192737_20201104T193158_D001 CS_OFFL_SIR_LRM_1B_20201104T200938_20201104T202514_D001 CS OFFL SIR LRM 1B 20201104T203106 20201104T204321 D001 CS_OFFL_SIR_LRM_1B_20201104T204323_20201104T204340_D001 CS_OFFL_SIR_LRM_1B_20201104T204344_20201104T204347_D001 CS_OFFL_SIR_LRM_1B_20201104T204350_20201104T204410_D001 CS OFFL SIR LRM 1B 20201104T204412 20201104T204436 D001 CS_OFFL_SIR_LRM_1B_20201104T204439_20201104T204535_D001 CS_OFFL_SIR_LRM_1B_20201104T211720_20201104T213110_D001 CS_OFFL_SIR_LRM_1B_20201104T213914_20201104T214115_D001 CS OFFL SIR LRM 1B 20201104T214822 20201104T220336 D001 CS_OFFL_SIR_LRM_1B_20201104T220538_20201104T221501 D001 CS OFFL SIR LRM 1B 20201104T221755 20201104T221810 D001 CS_OFFL_SIR_LRM_1B_20201104T221813_20201104T221934_D001 CS OFFL SIR LRM 1B 20201104T221936 20201104T222008 D001 CS_OFFL_SIR_LRM_1B_20201104T222011_20201104T222030_D001 CS_OFFL_SIR_LRM_1B_20201104T222033_20201104T222044_D001 CS OFFL SIR LRM 1B 20201104T222046 20201104T222056 D001 CS OFFL SIR LRM 1B 20201104T222059 20201104T222526 D001 CS_OFFL_SIR_LRM_1B_20201104T223723_20201104T225421_D001 CS OFFL SIR LRM 1B 20201104T231723 20201104T232520 D001 CS_OFFL_SIR_LRM_1B_20201104T235059_20201104T235204_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_20201104T235207_20201104T235215_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T235609_20201104T235723_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T235729_20201104T235741_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T235747_20201104T235821_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T235824_20201104T235828_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T235830_20201104T235846_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T235850_20201104T235905_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T235907_20201104T235909_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201104T235912_20201105T000505_D001	Loss of echo	The tracking echo is missing for one or more records

4.5 L1B Calibration Usage Check

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

Number of products with errors:

4.6 L1B Auxilary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

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:
0

4.8 L1B Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag (field 18) for each measurement record. The bit value of this flag indicates any problems when set.

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

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

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

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).

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

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.

50

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_220201104T001858_20201104T004047_D001		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_220201104T010911_20201104T014232_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_220201104T015839_20201104T022419_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_220201104T025303_20201104T025344_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_220201104T025509_20201104T032029_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_220201104T033754_20201104T035708_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_220201104T035729_20201104T040311_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_220201104T041223_20201104T041313_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_220201104T042659_20201104T050033_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_220201104T060553_20201104T061550_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_220201104T061835_20201104T063954_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_220201104T065728_20201104T070711_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_220201104T070859_20201104T071613_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_220201104T071655_20201104T072133_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_220201104T074358_20201104T081845_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_220201104T083750_20201104T090759_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_220201104T092257_20201104T092339_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220201104T092520_20201104T092658_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_220201104T092846_20201104T094109_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_220201104T094313_20201104T095826_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_220201104T101507_20201104T102528_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_220201104T103147_20201104T104752_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_220201104T111851_20201104T112125_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_220201104T112313_20201104T113655_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_220201104T115242_20201104T121417_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_220201104T121419_20201104T122610_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_220201104T122733_20201104T122825_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_220201104T123921_20201104T124626_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220201104T125312_20201104T131444_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_220201104T133135_20201104T135703_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_220201104T135706_20201104T135853_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_220201104T142155_20201104T145502_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_220201104T151158_20201104T154449_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_220201104T161031_20201104T161722_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_220201104T165131_20201104T172358_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_220201104T175634_20201104T181209_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_220201104T182959_20201104T190437_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_220201104T191544_20201104T191722_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_220201104T192737_20201104T193158_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_220201104T193253_20201104T195031_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_220201104T200938_20201104T202514_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_220201104T202621_20201104T202759_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_220201104T203106_20201104T204321_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_220201104T204412_20201104T204436_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220201104T205759_20201104T211603_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_220201104T211720_20201104T213110_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_220201104T214822_20201104T220336_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_220201104T220538_20201104T221501_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_220201104T223723_20201104T225421_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_220201104T232819_20201104T234243_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	179	179	179	0	0
SIR_SAR_1B	121	121	121	0	0
SIR_SIN_1B	104	104	104	0	0
SIR_LRM_2	175	175	172	3	0
SIR_SAR_2	104	119	119	0	0
SIR_SIN_2	119	104	102	2	0
SIR_GDR_2	15	15	0	0	15

6.1 QCC Errors

Number of products with QCC errors:

15

Product Type	MPHDUTNCDF	MPHXPFNCDF	MPHXVFNCDF	MPHYPFNCDF	MPHYVFNCDF	MPHZPFNCDF	MPHZVFNCDF	STRUCTURESIZ EANDREAD	-	-	-
SIR_GDR_2_	15	15	15	15	15	15	15	15			
0											
Test Description Key:											
Test Description	n Key:										
	n Key: Test na	me		Details							
Test Description Abbreviation MPHDUTNCDF	Test na	me Ita_UT1_NetCDF		Details Delta_UT1 mismat	lch						

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)
STRUCTURESIZEANDR	STRUCTURE_SIZE_AND_READ	Under investigation.

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6.2 QCC Warnings

Number of QCC reports with warnings

Total number of occurrences of each warning								
Product Type	AXDME	AXSMMEOCI	AXSMEOOO	AXWMMEOOO	•	-	-	
SIR_GDR_2_	0	1	1	1				
SIR_LRM_2_	0	2	1	1				
	·							
Test Description Key:								
Abbreviation	Test name			Details				
AXDME	AttributeXrefDemMustExist			The xref_dem attribute is ma	andatory in SIN products ove	r continental ice		
AXSMMEOCI	AttributeXrefSlopeModelMus	stExistOverContinentalIce		The xref_slope_model is mandatory in LRM products over continental ice				
AXSMEOOO	AttributeXrefSsbMustExistOverOpenOcean			The xref_ssb is mandatory in LRM products over open ocean				
AXWMMEOOO	AttributeXrefWindModelMus	tExistOverOpenOcean		The xref_wind_model attribu	te is mandatory in LRM prod	ucts over open ocean		

6.2 Missing QCC Reports

Number of products with missing QCC reports:

Product name CS_OFFL_SIR_GDR_2_20201104T234452_20201105T012406_D002