

12/04/2021



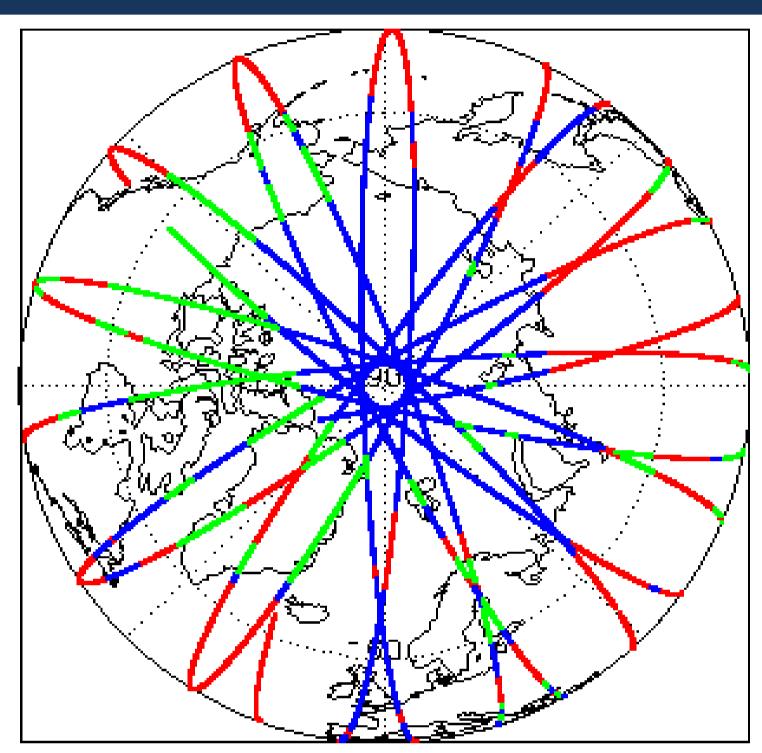
1. Overview

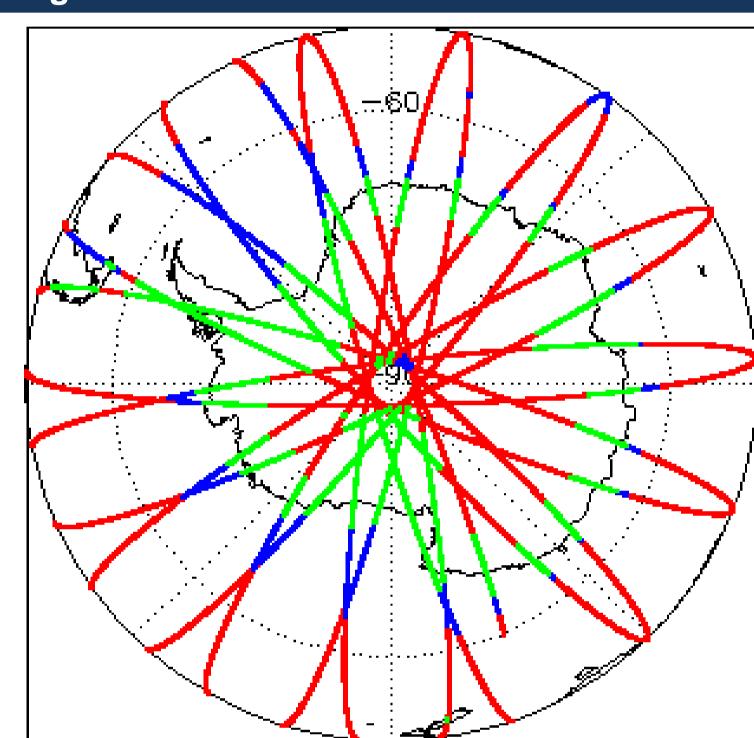
Report Production Date:	12-May-2021 CryoSat Ice Processor			
Processor Used:				
Data Used:	L1B and L2 OFFLINE Data			

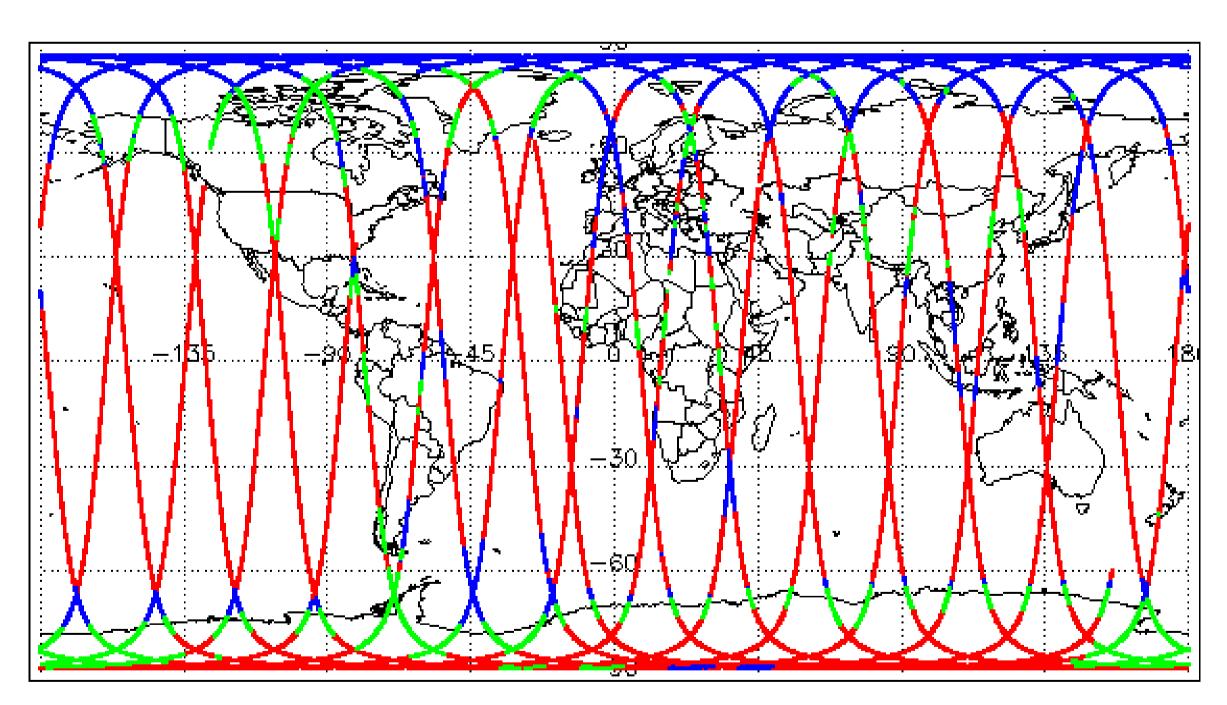
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Star Tracker Usage Check	Nominal
L1B Tracking Flag Check	See Section 4.4
L1B Calibration Usage Check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

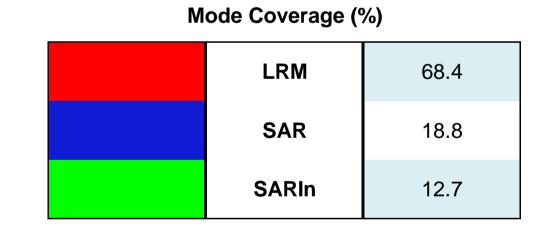
Mission / Instru	iment News
11-Apr-2021	None
12-Apr-2021	Due to MMFU recovery, SIRAL unavailability on 12/04/2021 from 15:52:20 to 16:06:02
13-Apr-2021	Nothing planned

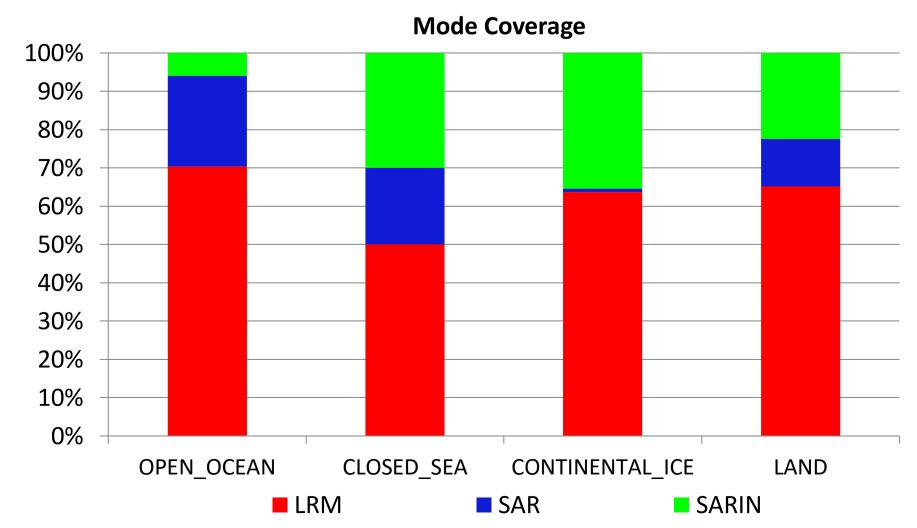
2. Global Coverage

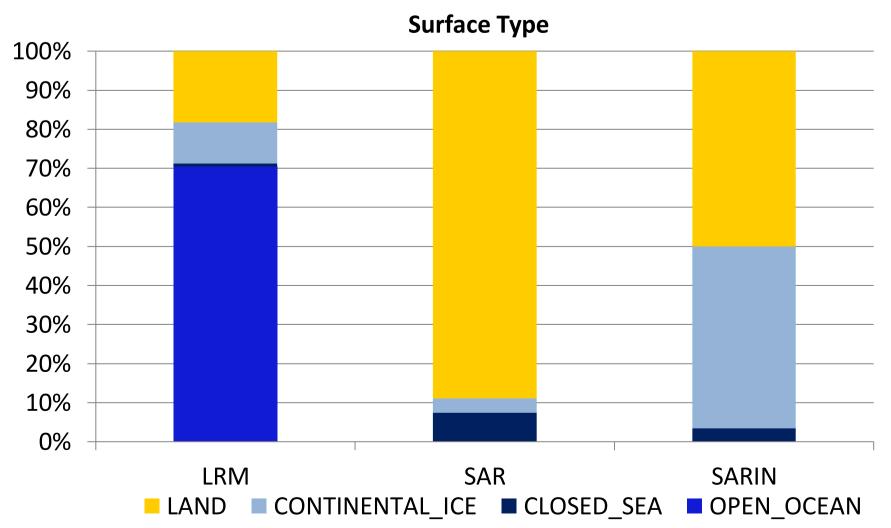












3. Instrument Configuration

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

SIRAL instrument(s) in use:

SIRAL - A

0

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.

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.

Number of products with errors:

118 **Test Failed** Description **Product** The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T010308_20210412T010339_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T010343_20210412T010401_D001 Loss of echo Loss of echo CS_OFFL_SIR_LRM_1B_20210412T010403_20210412T010446_D001 The tracking echo is missing for one or more records Loss of echo CS_OFFL_SIR_LRM_1B_20210412T010448_20210412T010451_D001 The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T010455_20210412T010458_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T010501_20210412T010521_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T010525_20210412T010531_D001 Loss of echo The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20210412T012220_20210412T013954_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T015700_20210412T021036_D001 Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T022614_20210412T022645_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T024148_20210412T024559_D001 CS_OFFL_SIR_LRM_1B_20210412T024602_20210412T024605_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T024607_20210412T024941_D001 Loss of echo The tracking echo is missing for one or more records Loss of echo CS_OFFL_SIR_LRM_1B_20210412T025220_20210412T030101_D001 The tracking echo is missing for one or more records Loss of echo CS_OFFL_SIR_LRM_1B_20210412T030103_20210412T030241_D001 The tracking echo is missing for one or more records Loss of echo CS_OFFL_SIR_LRM_1B_20210412T033925_20210412T034746_D001 The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T035141_20210412T035629_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T035912_20210412T040500_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T042008_20210412T042535_D001 Loss of echo The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20210412T042539_20210412T042605_D001 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_20210412T042607_20210412T042621_D001 Loss of echo CS_OFFL_SIR_LRM_1B_20210412T042623_20210412T042624_D001 Loss of echo The tracking echo is missing for one or more records Loss of echo CS_OFFL_SIR_LRM_1B_20210412T042626_20210412T042641_D001 The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T042644_20210412T042751_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T042754_20210412T042801_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T042806_20210412T042810_D001 Loss of echo The tracking echo is missing for one or more records Loss of echo CS_OFFL_SIR_LRM_1B_20210412T042816_20210412T042836_D001 The tracking echo is missing for one or more records

CS OFFL SIR LRM 1B 20210412T042852 20210412T042942 D001 Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T043343_20210412T043414_D001 CS_OFFL_SIR_LRM_1B_20210412T050141_20210412T050526_D001 Loss of echo The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20210412T051141_20210412T053641_D001 Loss of echo The tracking echo is missing for one or more records Loss of echo CS OFFL SIR LRM 1B 20210412T053644 20210412T053650 D001 The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T053652_20210412T053704_D001 Loss of echo The tracking echo is missing for one or more records

Loss of echo CS_OFFL_SIR_LRM_1B_20210412T053706_20210412T053733_D001 The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T053735_20210412T053810_D001 Loss of echo The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20210412T053813_20210412T054024_D001 The tracking echo is missing for one or more records Loss of echo CS OFFL SIR LRM 1B 20210412T054239 20210412T054242 D001 The tracking echo is missing for one or more records Loss of echo CS OFFL SIR LRM 1B 20210412T054248 20210412T054607 D001 Loss of echo The tracking echo is missing for one or more records CS OFFL SIR LRM 1B 20210412T060333 20210412T060825 D001

The tracking echo is missing for one or more records Loss of echo Loss of echo CS_OFFL_SIR_LRM_1B_20210412T060942_20210412T060953_D001 The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210412T060955_20210412T060956_D001 Loss of echo The tracking echo is missing for one or more records

	l	<u></u>
CS_OFFL_SIR_LRM_1B_20210412T060958_20210412T060959_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T061210_20210412T061227_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T061230_20210412T063752_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T064447_20210412T064814_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T074139_20210412T074456_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T074529_20210412T074725_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T074728_20210412T074728_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T074731_20210412T074750_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T074752_20210412T074839_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T074843_20210412T075714_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T075717_20210412T080659_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T081925_20210412T082516_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T083034_20210412T090430_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T091756_20210412T091855_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T091936_20210412T092006_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T092349_20210412T092603_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T092614_20210412T092635_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T092638_20210412T092658_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T093013_20210412T093112_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T093622_20210412T093937_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T094007_20210412T094202_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T095857_20210412T100409_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T104543_20210412T104645_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T110557_20210412T110737_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T110826_20210412T111333_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T111507_20210412T112118_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T114044_20210412T114311_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T122423_20210412T122439_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T122442_20210412T122503_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T122507_20210412T122523_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T122525_20210412T122551_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T122553_20210412T122553_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T122556_20210412T122640_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T125826_20210412T131102_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T132024_20210412T132220_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T132411_20210412T132723_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T132908_20210412T134444_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T134647_20210412T135659_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T140000_20210412T140629_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T142316_20210412T143528_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T142832_20210412T143950_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T144008_20210412T144711_D001	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_20210412T145856_20210412T150142_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T153201_20210412T153324_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T153336_20210412T153435_D001	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_20210412T153437_20210412T153457_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T153459_20210412T153510_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T153513_20210412T153836_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T153838_20210412T154621_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T160602_20210412T160734_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T161018_20210412T161244_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T161246_20210412T163421_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T163654_20210412T164531_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T164800_20210412T171305_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T171531_20210412T171605_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T171817_20210412T172144_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T173852_20210412T174326_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T174453_20210412T174631_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T174635_20210412T181305_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T182700_20210412T185651_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T185727_20210412T185946_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T185946_20210412T190211_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T201631_20210412T202028_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T202030_20210412T202235_D001	Loss of echo	The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20210412T202431_20210412T202610_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T203001_20210412T203205_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T203348_20210412T203353_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T203414_20210412T203439_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T203610_20210412T203730_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T203730_20210412T203931_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T205706_20210412T213121_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T220554_20210412T221302_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T221454_20210412T221616_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T221627_20210412T221640_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T224626_20210412T230420_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T230431_20210412T230955_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210412T231736_20210412T232148_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:

Product	Test Failed	Description
CS_OFFL_SIR_SIN_1B_20210412T060210_20210412T060215_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-determined baseline and also to check the validity 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:

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20210412T035912_20210412T040500_D001	TECHO error TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_SIN_1B_20210412T060210_20210412T060215_D001	Cal1 Correction missing,	The Cal1 Correction has not been applied

5. Level 2 Data Quality Check

5.1 L2 Product Format Check

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

Number of products with errors:

5.2 L2 Product Header Analysis

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

Number of products with errors: 0

5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

5.4 L2 Auxiliary Correction Error Check

CryoSat L2 data includes a correction error flag (field 30) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

5.5 L2 Measurement Quality Flag Check

CryoSat L2 data includes a quality flag (field 50) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Currently, there are several common error flags raised in the Level 2 products which are expected due to operational mode or surface type. All common flags are summarised in the list below, followed by a table of any additional issues arising from this test.

Freeboard error: This flag is correctly set in all L2 SAR products that are not discriminated as sea-ice, and for which freeboard cannot be calculated.

Height and Backscatter errors: These flags are currently set for products over land, but this is to be expected. Retracker 1 Height and Backscatter error flags are also set for products over sea-ice, but this is to be expected.

Peakiness error: This flag is currently set for products over sea-ice, but this is to be expected.

SARIn X-Track Angle Error: This flag is set when the difference between the computed surface elevation and the DEM is >50 m. The DEM is only available over Greenland and Antarctica and as a result this flag is set for L2 SARIn products in all other locations as expected.

SSHA interpolation error: This flag is currently set for a number of SAR products occurring at surface type boundaries, but this is to be expected.

Number of products with errors: 64		
Product	Test Failed	Description
CS_OFFL_SIR_LRM_220210412T001857_20210412T005018_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_220210412T010403_20210412T010446_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210412T011024_20210412T011739_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_220210412T012220_20210412T013954_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_220210412T015700_20210412T021036_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_220210412T021408_20210412T022457_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_220210412T022614_20210412T022645_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_220210412T025220_20210412T030101_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_220210412T030103_20210412T030241_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_220210412T030421_20210412T031849_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_220210412T033442_20210412T033602_D001		There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210412T033925_20210412T034746_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_220210412T035141_20210412T035629_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_220210412T043520_20210412T045814_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_220210412T051141_20210412T053641_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_220210412T060125_20210412T060210_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_220210412T061230_20210412T063752_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_220210412T065127_20210412T072449_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_220210412T074843_20210412T075714_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_220210412T075717_20210412T080659_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_220210412T081116_20210412T081739_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_220210412T083034_20210412T090430_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_220210412T091756_20210412T091855_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_220210412T092638_20210412T092658_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_220210412T094007_20210412T094202_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_220210412T094423_20210412T095654_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_220210412T101008_20210412T103221_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_220210412T103506_20210412T104436_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_220210412T110557_20210412T110737_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_220210412T111507_20210412T112118_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_220210412T112158_20210412T113525_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_220210412T115007_20210412T122219_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_220210412T123859_20210412T125818_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_220210412T125826_20210412T131102_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_220210412T132908_20210412T134444_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_220210412T134647_20210412T135659_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_220210412T141859_20210412T142105_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_220210412T142316_20210412T143528_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_220210412T150833_20210412T152312_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_220210412T152451_20210412T152721_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_220210412T153437_20210412T153457_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210412T153838_20210412T154621_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210412T160602_20210412T160734_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_220210412T161018_20210412T161244_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_220210412T161246_20210412T163421_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_220210412T164800_20210412T171305_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_220210412T172307_20210412T172342_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_220210412T172342_20210412T172347_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_220210412T174635_20210412T181305_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_220210412T182700_20210412T185651_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_220210412T192007_20210412T195226_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_220210412T200536_20210412T201151_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_220210412T201631_20210412T202028_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_220210412T203001_20210412T203205_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_220210412T203414_20210412T203439_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_220210412T205706_20210412T213121_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_220210412T214737_20210412T220349_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_220210412T220554_20210412T221302_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_220210412T223634_20210412T224539_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_220210412T224626_20210412T230420_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_220210412T230431_20210412T230955_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_220210412T232402_20210412T234559_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_220210412T234621_20210412T235921_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_220210412T060210_20210412T060215_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	182	182	182	0	0
SIR_SAR_1B	116	116	116	0	0
SIR_SIN_1B	107	107	107	0	0
SIR_LRM_2	182	182	178	4	0
SIR_SAR_2	107	116	116	0	0
SIR_SIN_2	116	107	105	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	•	-	-	-
SIR_GDR_2_	15	15	15	15	15	15	15	-			

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)		

6.2 QCC Warnings

Number of QCC reports with warnings

6

Total numb	er of occurrences	s of each warning

_		Total number of cocumulations						
	Product Type	AXDME	AXSMMEOCI	-	-	-	-	-
	SIR_LRM_2_	0	4					
	SIR_SIN_2_	2	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