



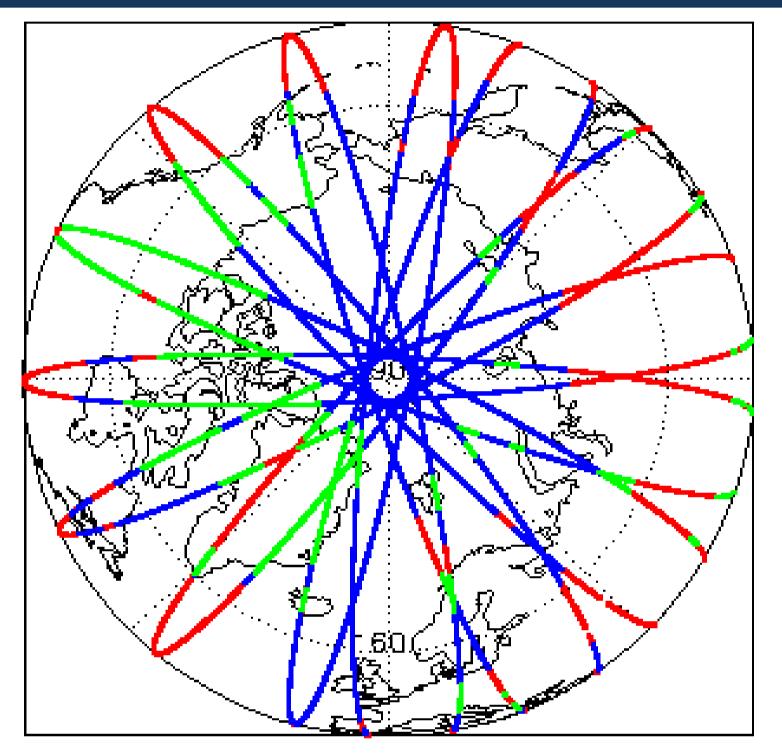
1. Overview

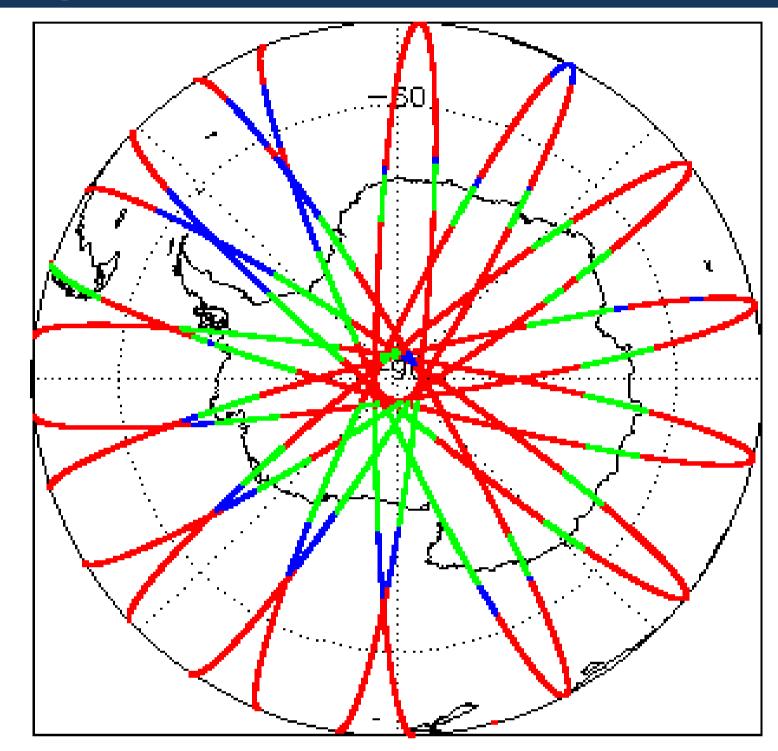
Report Production Date:	04-May-2021
Processor Used:	CryoSat Ice Processor
Data Used:	L1B and L2 OFFLINE Data

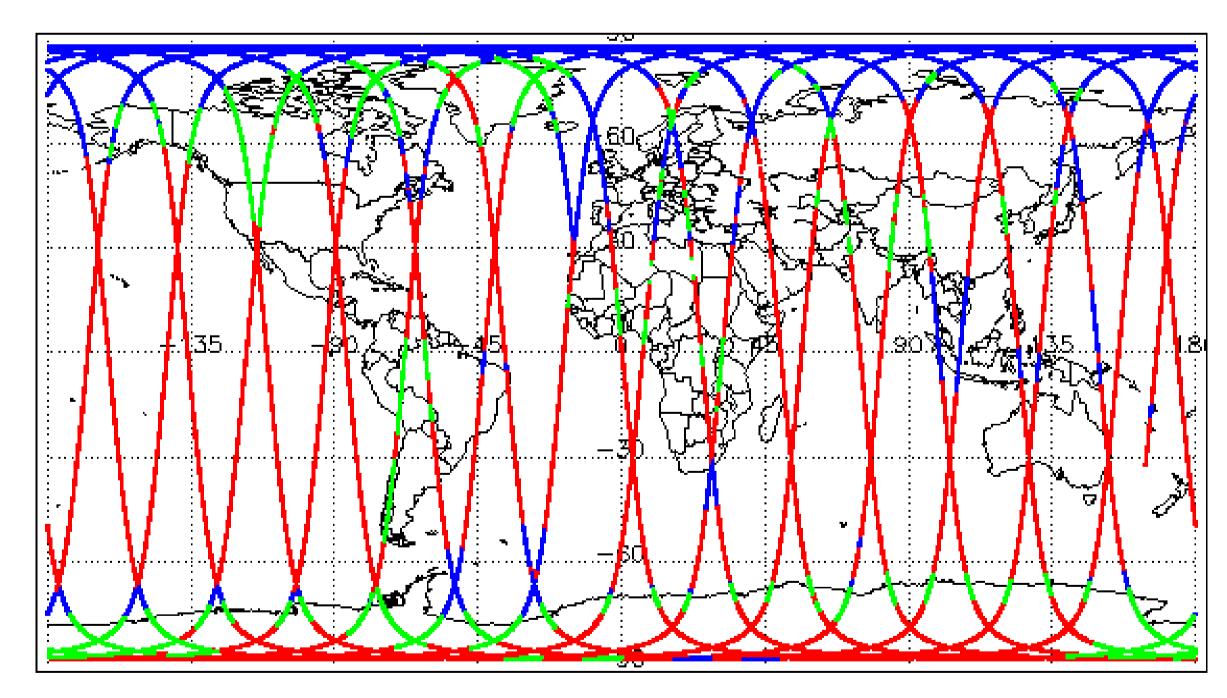
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Star Tracker Usage Check	Nominal
L1B Tracking Flag Check	See Section 4.4
L1B Calibration Usage Check	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 / Instrument News		
02-Apr-2021	None	
03-Apr-2021	None	
04-Apr-2021	Nothing planned	

2. Global Coverage



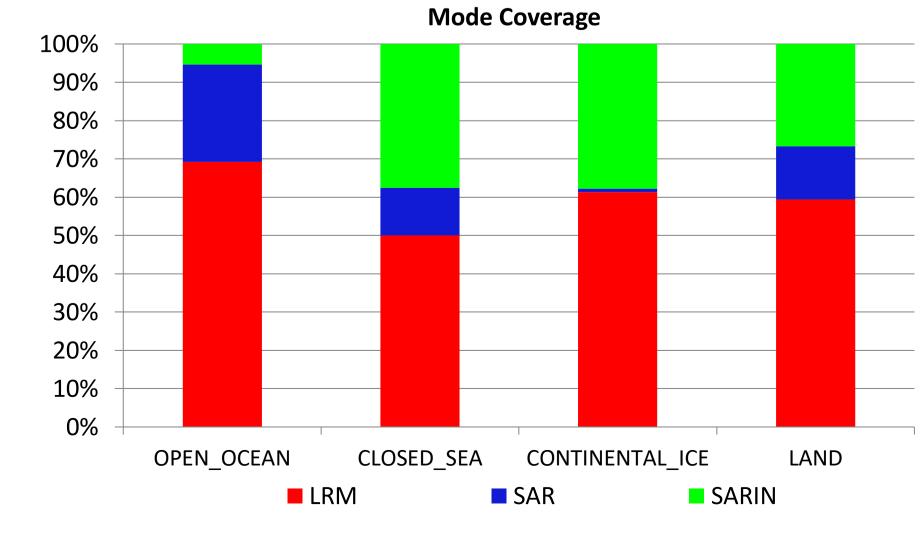


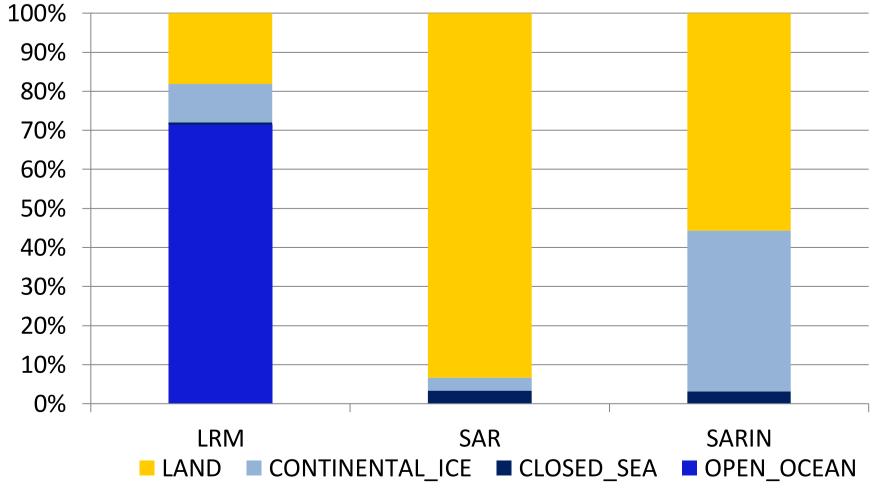




LRM	66.2
SAR	20.3
SARIn	13.5

Surface Type





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 Che	ck		
Each product, retrieved and unpacked from	the science server, is checked	o ensure it consists of both an XML header file (.HDR) and a product file (.DBL).	
Number of products with errors:	0		
4.2 L1B Product Header Ana	ysis		
For all products, a series of pre-defined che	ecks 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 Chec	ĸ		
Each product is checked in order to ensure	a valid star tracker file has been	used in processing.	
Number of products with errors:	0		
4.4 L1B Tracking Flags Chec	k		
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:

130

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20210403T002248_20210403T002252_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T002255_20210403T002316_D001	Loss of echo	The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20210403T002318_20210403T002333_D001 CS_OFFL_SIR_LRM_1B_20210403T002335_20210403T002344_D001 CS_OFFL_SIR_LRM_1B_20210403T002640_20210403T005905_D001 CS_OFFL_SIR_LRM_1B_20210403T011706_20210403T012935_D001 CS_OFFL_SIR_LRM_1B_20210403T020116_20210403T020131_D001 CS_OFFL_SIR_LRM_1B_20210403T020135_20210403T020157_D001 CS_OFFL_SIR_LRM_1B_20210403T020201_20210403T020215_D001 CS_OFFL_SIR_LRM_1B_20210403T020219_20210403T020251_D001 CS_OFFL_SIR_LRM_1B_20210403T020253_20210403T020302_D001 CS_OFFL_SIR_LRM_1B_20210403T020308_20210403T020317_D001 CS_OFFL_SIR_LRM_1B_20210403T020320_20210403T020403_D001 CS_OFFL_SIR_LRM_1B_20210403T020713_20210403T020735_D001 CS_OFFL_SIR_LRM_1B_20210403T020838_20210403T022028_D001 CS_OFFL_SIR_LRM_1B_20210403T022232_20210403T023821_D001 CS_OFFL_SIR_LRM_1B_20210403T025416_20210403T030443_D001 CS_OFFL_SIR_LRM_1B_20210403T030549_20210403T030803_D001 CS_OFFL_SIR_LRM_1B_20210403T031101_20210403T032212_D001 CS_OFFL_SIR_LRM_1B_20210403T032247_20210403T032314_D001 CS_OFFL_SIR_LRM_1B_20210403T032409_20210403T032550_D001 CS_OFFL_SIR_LRM_1B_20210403T033959_20210403T034322_D001 CS_OFFL_SIR_LRM_1B_20210403T034329_20210403T034350_D001 CS_OFFL_SIR_LRM_1B_20210403T034352_20210403T035343_D001 CS_OFFL_SIR_LRM_1B_20210403T042457_20210403T042605_D001 CS_OFFL_SIR_LRM_1B_20210403T043036_20210403T050437_D001 CS_OFFL_SIR_LRM_1B_20210403T051842_20210403T052438_D001 CS_OFFL_SIR_LRM_1B_20210403T052441_20210403T052451_D001 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 The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records 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_20210403T052454_20210403T052457_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T052500_20210403T052626_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T052742_20210403T052836_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T053224_20210403T055335_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T060942_20210403T063626_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T063629_20210403T063754_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T063757_20210403T063816_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T063819_20210403T063830_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T063838_20210403T063902_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T070104_20210403T070520_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T070626_20210403T070803_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T070805_20210403T070817_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210403T070819_20210403T070823_D001	Loss of echo	The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20210403T070825_20210403T070906_D001
CS_OFFL_SIR_LRM_1B_20210403T070908_20210403T073618_D001
CS_OFFL_SIR_LRM_1B_20210403T084031_20210403T084306_D001
CS_OFFL_SIR_LRM_1B_20210403T084339_20210403T084419_D001
CS_OFFL_SIR_LRM_1B_20210403T084617_20210403T084720_D001
CS_OFFL_SIR_LRM_1B_20210403T084840_20210403T085618_D001
CS_OFFL_SIR_LRM_1B_20210403T085624_20210403T085641_D001
CS_OFFL_SIR_LRM_1B_20210403T090015_20210403T090146_D001
CS_OFFL_SIR_LRM_1B_20210403T090150_20210403T090622_D001
CS_OFFL_SIR_LRM_1B_20210403T091747_20210403T092320_D001
CS_OFFL_SIR_LRM_1B_20210403T101848_20210403T101859_D001
CS_OFFL_SIR_LRM_1B_20210403T102246_20210403T102312_D001
CS_OFFL_SIR_LRM_1B_20210403T102321_20210403T102334_D001
CS_OFFL_SIR_LRM_1B_20210403T102658_20210403T102707_D001
CS_OFFL_SIR_LRM_1B_20210403T102732_20210403T102925_D001
CS_OFFL_SIR_LRM_1B_20210403T103108_20210403T103118_D001
CS_OFFL_SIR_LRM_1B_20210403T103120_20210403T103406_D001
CS_OFFL_SIR_LRM_1B_20210403T105708_20210403T110217_D001
CS_OFFL_SIR_LRM_1B_20210403T114349_20210403T114418_D001
CS_OFFL_SIR_LRM_1B_20210403T114421_20210403T114452_D001
CS_OFFL_SIR_LRM_1B_20210403T123923_20210403T124121_D001
CS_OFFL_SIR_LRM_1B_20210403T124809_20210403T130312_D001
CS_OFFL_SIR_LRM_1B_20210403T132219_20210403T132225_D001
CS_OFFL_SIR_LRM_1B_20210403T132230_20210403T132230_D001
CS_OFFL_SIR_LRM_1B_20210403T132240_20210403T132257_D001

Loss of echo

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CS_OFFL_SIR_LRM_1B_20210403T132300_20210403T132304_D001 CS_OFFL_SIR_LRM_1B_20210403T132307_20210403T132309_D001 CS_OFFL_SIR_LRM_1B_20210403T132311_20210403T132328_D001 CS_OFFL_SIR_LRM_1B_20210403T132330_20210403T132331_D001 CS_OFFL_SIR_LRM_1B_20210403T132333_20210403T132350_D001 CS_OFFL_SIR_LRM_1B_20210403T132357_20210403T132412_D001 CS_OFFL_SIR_LRM_1B_20210403T132416_20210403T132422_D001 CS_OFFL_SIR_LRM_1B_20210403T132427_20210403T132452_D001 CS_OFFL_SIR_LRM_1B_20210403T135638_20210403T141040_D001 CS_OFFL_SIR_LRM_1B_20210403T141831_20210403T142032_D001 CS_OFFL_SIR_LRM_1B_20210403T142712_20210403T144249_D001 CS_OFFL_SIR_LRM_1B_20210403T144450_20210403T144658_D001 CS_OFFL_SIR_LRM_1B_20210403T144701_20210403T145413_D001 CS_OFFL_SIR_LRM_1B_20210403T145656_20210403T145923_D001 CS_OFFL_SIR_LRM_1B_20210403T145927_20210403T145942_D001 CS_OFFL_SIR_LRM_1B_20210403T145944_20210403T145953_D001 CS_OFFL_SIR_LRM_1B_20210403T145956_20210403T150003_D001 CS_OFFL_SIR_LRM_1B_20210403T150006_20210403T150058_D001 CS_OFFL_SIR_LRM_1B_20210403T150100_20210403T150437_D001 CS_OFFL_SIR_LRM_1B_20210403T151924_20210403T152020_D001 CS_OFFL_SIR_LRM_1B_20210403T152208_20210403T153319_D001 CS_OFFL_SIR_LRM_1B_20210403T154036_20210403T154211_D001 CS_OFFL_SIR_LRM_1B_20210403T154213_20210403T154217_D001 CS_OFFL_SIR_LRM_1B_20210403T154222_20210403T154225_D001 CS_OFFL_SIR_LRM_1B_20210403T154229_20210403T154253_D001 CS_OFFL_SIR_LRM_1B_20210403T163012_20210403T163123_D001

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CS_OFFL_SIR_LRM_1B_20210403T163135_20210403T163143_D001 Loss of echo The tracking echo is missing for one or more records	
CS_OFFL_SIR_LRM_1B_20210403T163521_20210403T163545_D001 Loss of echo The tracking echo is missing for one or more records	
CS_OFFL_SIR_LRM_1B_20210403T163550_20210403T163610_D001 Loss of echo The tracking echo is missing for one or more records	
CS_OFFL_SIR_LRM_1B_20210403T163620_20210403T163628_D001 Loss of echo The tracking echo is missing for one or more records	
CS_OFFL_SIR_LRM_1B_20210403T163630_20210403T163634_D001 Loss of echo The tracking echo is missing for one or more records	
CS_OFFL_SIR_LRM_1B_20210403T163637_20210403T163644_D001 Loss of echo The tracking echo is missing for one or more records	
CS_OFFL_SIR_LRM_1B_20210403T163648_20210403T163731_D001 Loss of echo The tracking echo is missing for one or more records	
CS_OFFL_SIR_LRM_1B_20210403T163733_20210403T164403_D001 Loss of echo The tracking echo is missing for one or more records	
CS_OFFL_SIR_LRM_1B_20210403T165849_20210403T173243_D001 Loss of echo The tracking echo is missing for one or more records	
CS_OFFL_SIR_LRM_1B_20210403T173513_20210403T173721_D001 Loss of echo The tracking echo is missing for one or more records	
CS_OFFL_SIR_LRM_1B_20210403T173750_20210403T174323_D001 Loss of echo The tracking echo is missing for one or more records	
CS_OFFL_SIR_LRM_1B_20210403T181511_20210403T182018_D001 Loss of echo The tracking echo is missing for one or more records	

CS_OFFL_SIR_LRM_1B_20210403T183454_20210403T183541_D001
CS_OFFL_SIR_LRM_1B_20210403T184243_20210403T184244_D001
CS_OFFL_SIR_LRM_1B_20210403T184254_20210403T184301_D001
CS_OFFL_SIR_LRM_1B_20210403T184303_20210403T184311_D001
CS_OFFL_SIR_LRM_1B_20210403T184313_20210403T184313_D001
CS_OFFL_SIR_LRM_1B_20210403T184317_20210403T184337_D001
CS_OFFL_SIR_LRM_1B_20210403T184340_20210403T184343_D001
CS_OFFL_SIR_LRM_1B_20210403T184345_20210403T191140_D001
CS_OFFL_SIR_LRM_1B_20210403T192442_20210403T194527_D001
CS_OFFL_SIR_LRM_1B_20210403T194530_20210403T195405_D001
CS_OFFL_SIR_LRM_1B_20210403T195411_20210403T195411_D001
CS_OFFL_SIR_LRM_1B_20210403T195415_20210403T195701_D001
CS_OFFL_SIR_LRM_1B_20210403T195734_20210403T195946_D001
CS_OFFL_SIR_LRM_1B_20210403T211309_20210403T212049_D001
CS_OFFL_SIR_LRM_1B_20210403T212216_20210403T212733_D001
CS_OFFL_SIR_LRM_1B_20210403T212916_20210403T213046_D001
CS_OFFL_SIR_LRM_1B_20210403T213304_20210403T213410_D001
CS_OFFL_SIR_LRM_1B_20210403T213423_20210403T213509_D001
CS_OFFL_SIR_LRM_1B_20210403T213511_20210403T213538_D001
CS_OFFL_SIR_LRM_1B_20210403T213538_20210403T213630_D001
CS_OFFL_SIR_LRM_1B_20210403T213947_20210403T213953_D001
CS_OFFL_SIR_LRM_1B_20210403T230553_20210403T231045_D001
CS_OFFL_SIR_LRM_1B_20210403T231117_20210403T231258_D001
CS_OFFL_SIR_LRM_1B_20210403T233209_20210403T233239_D001
CS_OFFL_SIR_LRM_1B_20210403T235528_20210404T000810_D001

Loss of echo	The tracking echo is missing for one or more records
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4.5 L1B Calibration Usage Check		
Each product is checked in order to ensure that the necessary calibration files l	have been used in processing.	
Number of products with errors: 0		
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	validity 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 measureme	ent record. The bit value of this flag indicate	es 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 n	neasurement record. The bit value of this fla	ag indicates any problems when set.
Currently, there are several common error flags raised in the Level 1B problem, followed by a table of any additional issues arising from this test.		tional 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	, indicating that the ADC correction applicat	tion is deactivated, but this is in line with the current configuration.
Number of products with errors: 2		
Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20210403T031101_20210403T032212_D001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo

The tracking echo has returned an error and the Rx1 Echo Error flag is set, Echo error, TRK echo error CS_OFFL_SIR_LRM_1B_20210403T090150_20210403T090622_D001 indicating a degraded echo

5. Level 2 Data Quality Check

5.1 L2 Product Format Check

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

Number of products with errors:

5.2 L2 Product Header Analysis

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

Number of products with errors:

0

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:

58

0

Test Failed	Description
Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and 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
Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
	 Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter

CS_OFFL_SIR_LRM_220210403T012948_20210403T014711_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_220210403T020201_20210403T020215_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210403T020838_20210403T022028_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_220210403T022232_20210403T023821_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_220210403T025416_20210403T030443_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_220210403T031101_20210403T032212_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_220210403T032409_20210403T032550_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210403T034352_20210403T035343_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_220210403T040231_20210403T041715_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_220210403T043036_20210403T050437_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_220210403T052500_20210403T052626_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210403T053224_20210403T055335_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_220210403T055407_20210403T055655_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_220210403T060942_20210403T063626_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_220210403T063629_20210403T063754_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_220210403T070908_20210403T073618_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_220210403T074912_20210403T082412_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_220210403T084617_20210403T084720_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_220210403T084840_20210403T085618_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_220210403T090936_20210403T091607_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_220210403T092831_20210403T100237_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_220210403T101625_20210403T101731_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_220210403T102658_20210403T102707_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_220210403T103550_20210403T105529_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_220210403T110737_20210403T114213_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_220210403T120654_20210403T121120_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_220210403T121211_20210403T122950_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_220210403T124809_20210403T130312_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_220210403T130432_20210403T130540_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_220210403T131020_20210403T131731_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_220210403T132333_20210403T132350_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210403T133732_20210403T135509_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_220210403T135638_20210403T141040_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_220210403T142712_20210403T144249_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_220210403T144450_20210403T144658_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_220210403T144701_20210403T145413_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_220210403T152208_20210403T153319_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_220210403T152208_20210403T153319_D001 CS_OFFL_SIR_LRM_220210403T154036_20210403T154211_D001	(Retracker 3), Backscatter Error	There is a height and backscatter error for Retracker 2 and a height error
	(Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 and a height error
CS_OFFL_SIR_LRM_220210403T154036_20210403T154211_D001	 (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter 	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 for one or more
CS_OFFL_SIR_LRM_220210403T154036_20210403T154211_D001 CS_OFFL_SIR_LRM_2_20210403T160625_20210403T162158_D001	 (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error 	 There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 for one or more records There is a height and backscatter error for Retracker 2 for one or more records There is a height and backscatter error for Retracker 2 for one or more
CS_OFFL_SIR_LRM_220210403T154036_20210403T154211_D001 CS_OFFL_SIR_LRM_220210403T160625_20210403T162158_D001 CS_OFFL_SIR_LRM_220210403T165849_20210403T173243_D001	 (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter 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 There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 for one or more records There is a height and backscatter error for Retracker 2 for one or more records 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_220210403T154036_20210403T154211_D001 CS_OFFL_SIR_LRM_220210403T160625_20210403T162158_D001 CS_OFFL_SIR_LRM_220210403T165849_20210403T173243_D001 CS_OFFL_SIR_LRM_220210403T173513_20210403T173721_D001	 (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Surface Model Unavailable Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error 	 There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 for one or more records There is a height and backscatter error for Retracker 2 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records No DEM or Slope Model was used for the location of one or more records 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_2_20210403T154036_20210403T154211_D001 CS_OFFL_SIR_LRM_2_20210403T160625_20210403T162158_D001 CS_OFFL_SIR_LRM_2_20210403T165849_20210403T173243_D001 CS_OFFL_SIR_LRM_2_20210403T173513_20210403T173721_D001 CS_OFFL_SIR_LRM_2_20210403T174548_20210403T181107_D001	 (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Surface Model Unavailable Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error 	 There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 for one or more records There is a height and backscatter error for Retracker 2 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records No DEM or Slope Model was used for the location of one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records No DEM or Slope Model was used for the location of one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records 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_220210403T154036_20210403T154211_D001 CS_OFFL_SIR_LRM_220210403T160625_20210403T162158_D001 CS_OFFL_SIR_LRM_220210403T165849_20210403T173243_D001 CS_OFFL_SIR_LRM_220210403T173513_20210403T173721_D001 CS_OFFL_SIR_LRM_220210403T174548_20210403T181107_D001 CS_OFFL_SIR_LRM_220210403T184345_20210403T191140_D001	 (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Surface Model Unavailable Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Backscatter Error 	 There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 for one or more records There is a height and backscatter error for Retracker 2 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records No DEM or Slope Model was used for the location of one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records 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_220210403T200158_20210403T200243_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_220210403T201658_20210403T205058_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_220210403T212916_20210403T213046_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_220210403T215614_20210403T223024_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_220210403T224230_20210403T230230_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_220210403T230553_20210403T231045_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_220210403T231117_20210403T231258_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_220210403T233426_20210403T235445_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_220210403T235528_20210404T000810_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

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	185	185	185	0	0
SIR_SAR_1B	107	107	107	0	0
SIR_SIN_1B	105	105	105	0	0
SIR_LRM_2	185	185	182	3	0
SIR_SAR_2	105	107	107	0	0
SIR_SIN_2	107	105	101	4	0
SIR_GDR_2	14	14	0	0	14

6.1 QCC Errors

Number of products with QCC errors:

14

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

Test Description Key:	est 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

7

1

Total number of occurrences of each warning

Product Ty	/pe A	AXDME	AXSMMEOCI	-	-	-	-	-
SIR_LRM_	20)	3					
SIR_SIN_2	2_ 4	ļ.	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				

Number of products with missing QCC reports:

Product name

CS_OFFL_SIR_GDR_2__20210403T230058_20210404T004013_D002