

<u>12/11/2020</u>



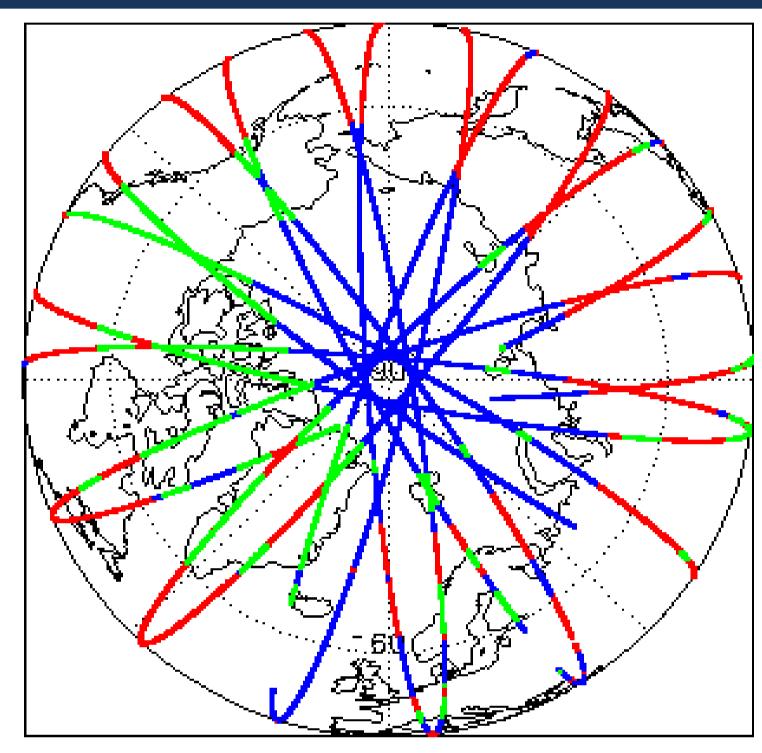
1. Overview

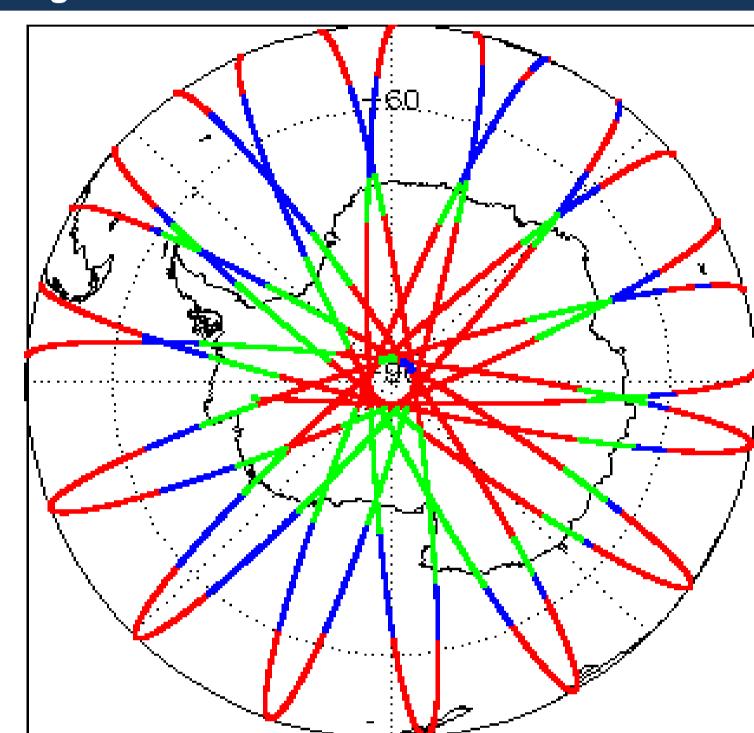
Report Production Date:	11-Dec-2020
Processor Used:	CryoSat Ice Processor
Data Used:	L1B and L2 OFFLINE Data

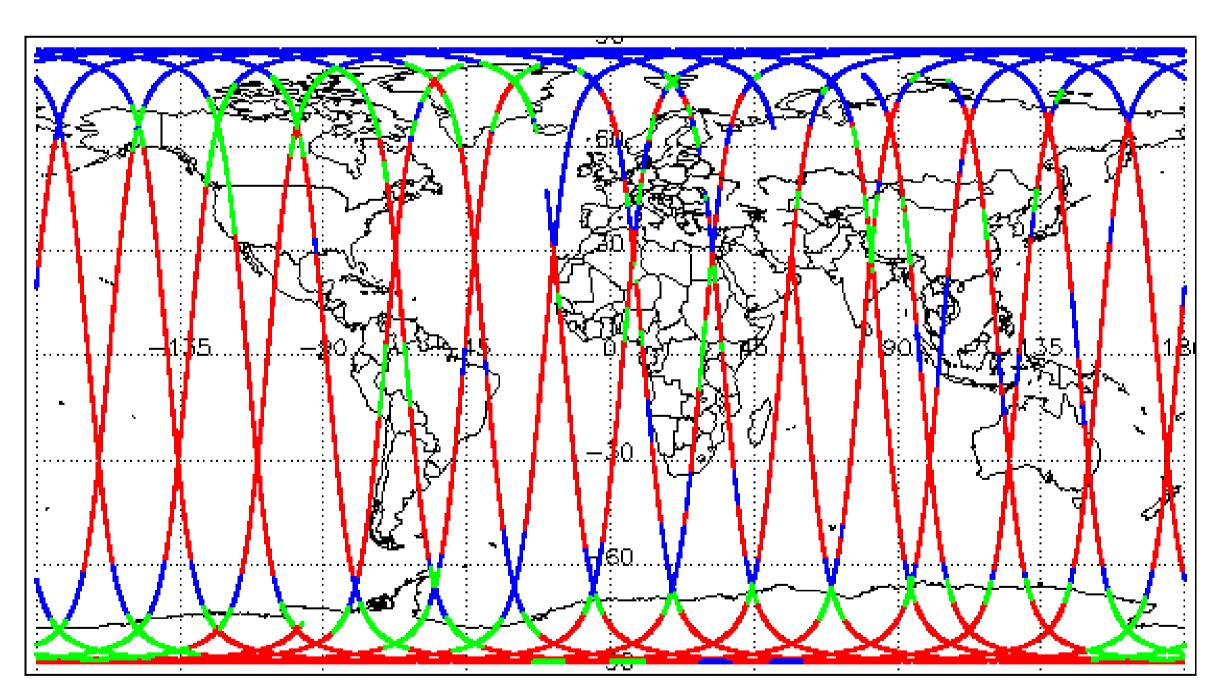
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Star Tracker Usage Check	Nominal
L1B Tracking Flag Check	See Section 4.4
L1B Calibration Usage Check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

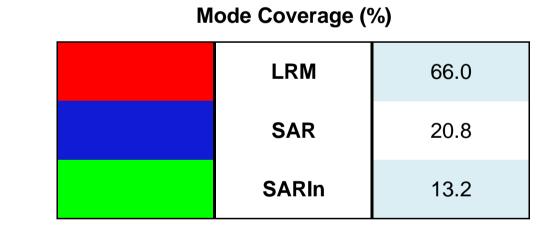
Mission / Instrument News						
11-Nov-2020	None					
12-Nov-2020	None					
13-Nov-2020	Nothing planned					

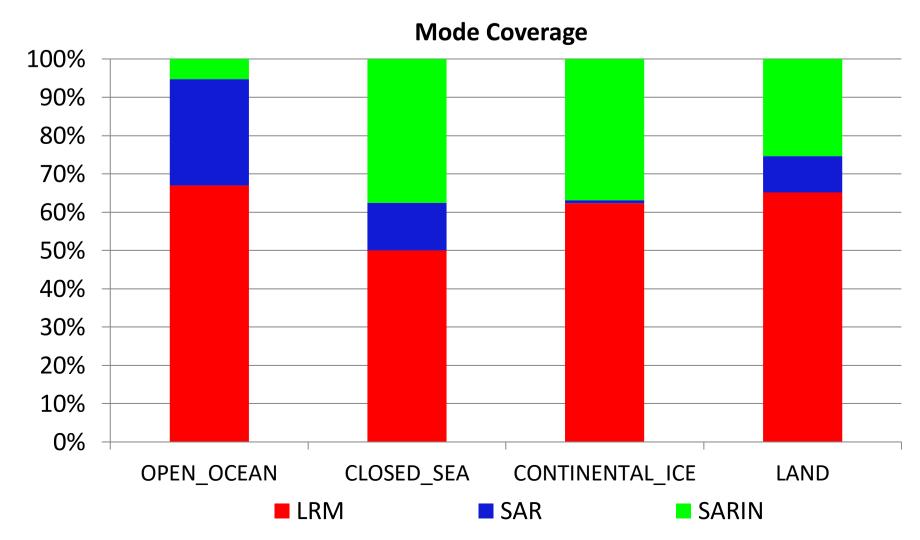
2. Global Coverage

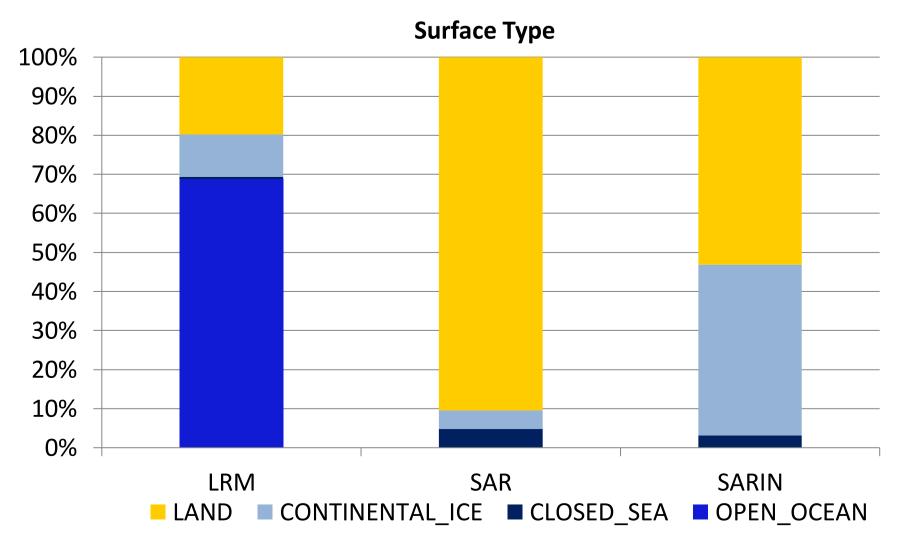












3. Instrument Configuration

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:

129

0

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20201111T235929_20201112T000818_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T001126_20201112T003432_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T003439_20201112T003516_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T003757_20201112T003853_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T004021_20201112T004423_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T005914_20201112T010008_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T010130_20201112T013449_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T015056_20201112T021454_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T021458_20201112T021536_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T021538_20201112T022242_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T022242_20201112T022505_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T033708_20201112T034409_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T034411_20201112T034648_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T034712_20201112T035208_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T035313_20201112T035442_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T035629_20201112T035630_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T035633_20201112T035730_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T035910_20201112T040015_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T040015_20201112T040216_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T040455_20201112T040521_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T041933_20201112T045303_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T052203_20201112T052627_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T052723_20201112T053116_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T053259_20201112T053542_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T053814_20201112T053942_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T061059_20201112T063212_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T064928_20201112T070840_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T073537_20201112T073601_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T073605_20201112T073607_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T073610_20201112T073615_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T073618_20201112T073641_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T073644_20201112T074342_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T074521_20201112T081120_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T081928_20201112T082154_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T083014_20201112T084243_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20201112T091416_20201112T091419_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091421_20201112T091424_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091427_20201112T091511_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091518_20201112T091547_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091550_20201112T091550_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091553_20201112T091555_D001	Loss of echo	The tracking echo is missing for one or more records

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CS_OFFL_SIR_LRM_1B_20201112T091559_20201112T091600_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091603_20201112T091629_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091631_20201112T091635_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091638_20201112T091642_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091644_20201112T091714_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091718_20201112T091721_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091723_20201112T091727_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091732_20201112T091749_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091751_20201112T091801_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091803_20201112T091815_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091817_20201112T091837_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091839_20201112T091846_D001 CS_OFFL_SIR_LRM_1B_20201112T091850_20201112T091858_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
CS_OFFL_SIR_LRM_1B_20201112T091900_20201112T091907_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091910_20201112T091923_D001	Loss of echo	The tracking echo is missing for one or more records The tracking cohe is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091925_20201112T091927_D001	Loss of echo	The tracking echo is missing for one or more records The tracking cohe is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091930_20201112T091940_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T091942_20201112T092028_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T092406_20201112T093336_D001 CS_OFFL_SIR_LRM_1B_20201112T093539_20201112T095042_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_20201112T093539_20201112T095042_D001 CS_OFFL_SIR_LRM_1B_20201112T100706_20201112T101858_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_20201112T100706_20201112T101858_D001 CS_OFFL_SIR_LRM_1B_20201112T101901_20201112T101902_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_20201112T101901_20201112T101902_D001 CS_OFFL_SIR_LRM_1B_20201112T101905_20201112T101907_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_20201112T101905_20201112T101907_D001 CS_OFFL_SIR_LRM_1B_20201112T101909_20201112T101930_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
CS_OFFL_SIR_LRM_1B_20201112T102411_20201112T103704_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T103828_20201112T104036_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T105305_20201112T105726_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T105814_20201112T105821_D001	Loss of echo	The tracking echo is missing for one or more records The tracking cohe is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T105826_20201112T105829_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T105833_20201112T105835_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T105837_20201112T105840_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T105842_20201112T105845_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_20201112T105849_20201112T105851_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T105854_20201112T105900_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_20201112T105903_20201112T105914_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_20201112T105916_20201112T105917_D001 CS_OFFL_SIR_LRM_1B_20201112T105919_20201112T110647_D001	Loss of echo	The tracking echo is missing for one or more records The tracking cohe is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T103919_20201112T110047_D001 CS_OFFL_SIR_LRM_1B_20201112T113800_20201112T113913_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
CS_OFFL_SIR_LRM_1B_20201112T114451_20201112T121042_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_20201112T121139_20201112T121824_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T121948_20201112T122044_D001 CS_OFFL_SIR_LRM_1B_20201112T123153_20201112T123828_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
CS_OFFL_SIR_LRM_1B_20201112T123153_20201112T123020_D001 CS_OFFL_SIR_LRM_1B_20201112T123859_20201112T123903_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_20201112T123905_20201112T123905_D001 CS_OFFL_SIR_LRM_1B_20201112T123905_20201112T123906_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T123909_20201112T123906_D001 CS_OFFL_SIR_LRM_1B_20201112T123909_20201112T123926_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_202011121123909_202011121123926_D001 CS_OFFL_SIR_LRM_1B_20201112T124057_20201112T124155_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_20201112T124037_20201112T124135_D001 CS_OFFL_SIR_LRM_1B_20201112T124434_20201112T130530_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T124434_20201112T130330_D001 CS_OFFL_SIR_LRM_1B_20201112T132411_20201112T135111_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_20201112T135411_20201112T135111_D001 CS_OFFL_SIR_LRM_1B_20201112T135113_20201112T135133_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_20201112T141258_20201112T141826_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_20201112T141238_20201112T141820_D001 CS_OFFL_SIR_LRM_1B_20201112T141932_20201112T142201_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_20201112T141932_20201112T142201_D001 CS_OFFL_SIR_LRM_1B_20201112T142205_20201112T142235_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_20201112T142238_20201112T142248_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T142250_20201112T142312_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T142314_20201112T142431_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T142434_20201112T144725_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T145559_20201112T145928_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T154944_20201112T155219_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T155349_20201112T155612_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T155646_20201112T155725_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T155913_20201112T160028_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T160213_20201112T160343_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T160213_20201112T160343_D001 CS_OFFL_SIR_LRM_1B_20201112T160449_20201112T160750_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_20201112T161309_20201112T161950_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T163054_20201112T163623_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T173237_20201112T173305_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T173515_20201112T173613_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T173944_20201112T174607_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T181016_20201112T181521_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T182211_20201112T185720_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T185722_20201112T185738_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T185741_20201112T185743_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T185747_20201112T185822_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T200200_20201112T201327_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T201448_20201112T201617_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T201619_20201112T201634_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T201636_20201112T201849_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T202330_20201112T203435_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T203437_20201112T203444_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T203447_20201112T203452_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T203456_20201112T203509_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T203513_20201112T203527_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T203529_20201112T203542_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T203544_20201112T203555_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T203559_20201112T203658_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T203705_20201112T203725_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20201112T203729_20201112T203748_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.

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_20201112T035910_20201112T040015_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_LRM_1B_20201112T074521_20201112T081120_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

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.

0

Product	Test Failed	Description
CS_OFFL_SIR_LRM_220201112T001126_20201112T003432_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_220201112T010130_20201112T013449_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_220201112T015056_20201112T021454_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_220201112T024304_20201112T031251_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_220201112T033016_20201112T033436_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_220201112T033708_20201112T034409_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_220201112T040557_20201112T040656_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_220201112T041933_20201112T045303_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_220201112T051209_20201112T051854_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_220201112T052203_20201112T052627_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_220201112T053259_20201112T053542_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_220201112T053814_20201112T053942_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_220201112T055748_20201112T060814_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_220201112T061059_20201112T063212_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_220201112T064928_20201112T070840_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_220201112T070932_20201112T071354_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_220201112T073644_20201112T074342_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_220201112T074521_20201112T081120_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_220201112T083014_20201112T084243_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_220201112T084330_20201112T090036_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_220201112T092406_20201112T093336_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_220201112T093539_20201112T095042_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_220201112T100706_20201112T101858_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_220201112T102411_20201112T103704_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_220201112T103828_20201112T104036_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_220201112T105919_20201112T110647_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220201112T111502_20201112T112923_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_220201112T114451_20201112T121042_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_220201112T124434_20201112T130530_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_220201112T132411_20201112T135111_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_220201112T142314_20201112T142431_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_220201112T142434_20201112T144725_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_220201112T150443_20201112T153734_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_220201112T154944_20201112T155219_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_220201112T164337_20201112T171723_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_220201112T174835_20201112T180446_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_220201112T182211_20201112T185720_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_220201112T192010_20201112T194257_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_220201112T200200_20201112T201327_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_220201112T201448_20201112T201617_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_220201112T201636_20201112T201849_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_220201112T202330_20201112T203435_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_220201112T205029_20201112T210744_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_220201112T210943_20201112T212408_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_220201112T214044_20201112T215329_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_220201112T215446_20201112T215555_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_220201112T215756_20201112T220718_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_220201112T223026_20201112T224643_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_220201112T225210_20201112T230514_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_2__20201112T232048_20201112T233606_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_2__20201112T233931_20201112T234355_D001

Height Error (Retracker 2), Backscatter Error (Retracker 2)

There is a height and backscatter error for Retracker 2 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	208	208	208	0	0
SIR_SAR_1B	114	114	114	0	0
SIR_SIN_1B	105	105	105	0	0
SIR_LRM_2	202	202	200	2	0
SIR_SAR_2	105	112	112	0	0
SIR_SIN_2	112	105	105	0	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	-			

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

4

Total number of occurrences of each warning

Product Type	AXSMMEOCI	AXSMEOOO	AXWMMEOOO	-	-	•	-
SIR_GDR_2_	1	0	0				
SIR_LRM_2_	1	1	1				

Test Description Key:							
Abbreviation	Test name	Details					
AXSMMEOCI	AttributeXrefSlopeModelMustExistOverContinentalIce	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	AttributeXrefWindModelMustExistOverOpenOcean	The xref_wind_model attribute is mandatory in LRM products over open ocean					

6.2 Missing QCC Reports

Number of products with missing QCC reports:

1

Product name

CS_OFFL_SIR_GDR_2__20201112T233714_20201113T011629_D002