

1. Overview

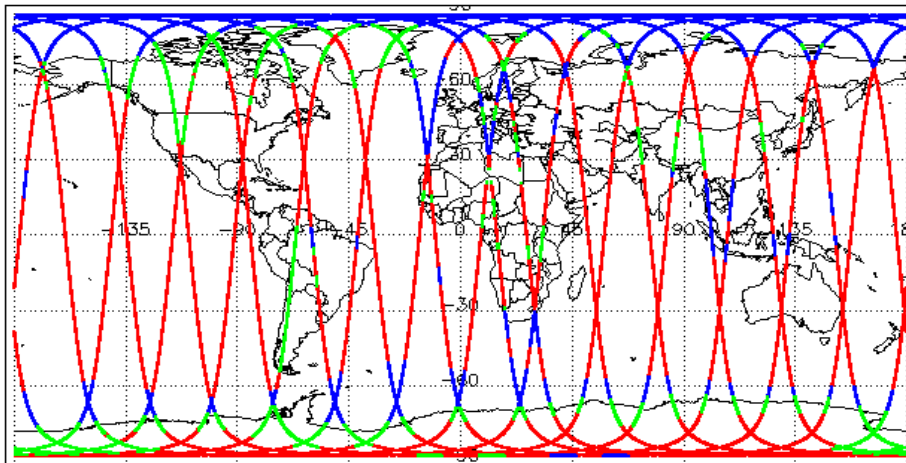
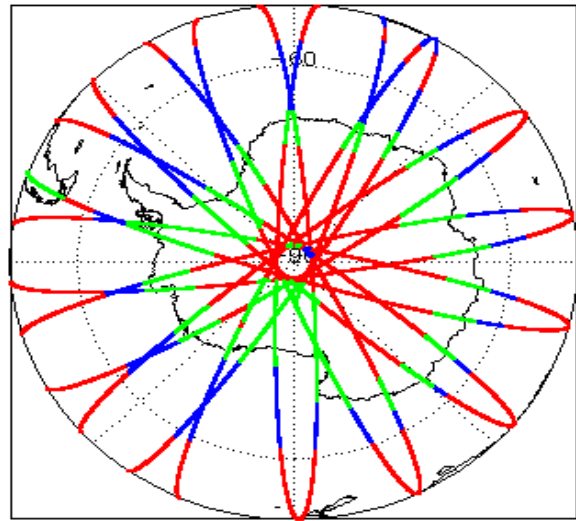
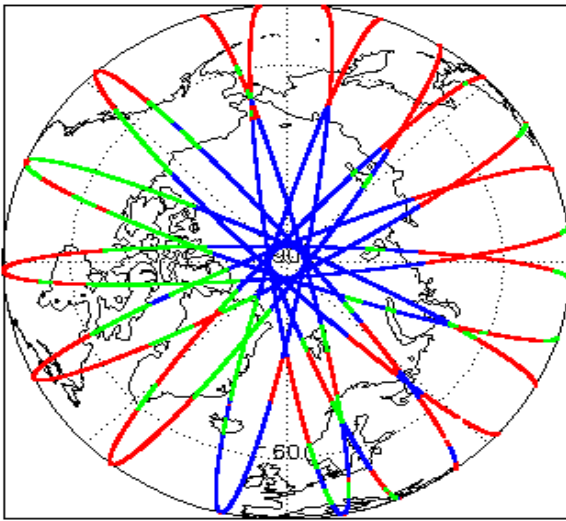
Report Production Date:	21-Nov-2019
Processor Used:	CryoSat Ice Processor
Data Used:	L1B and L2 OFFLINE Data

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

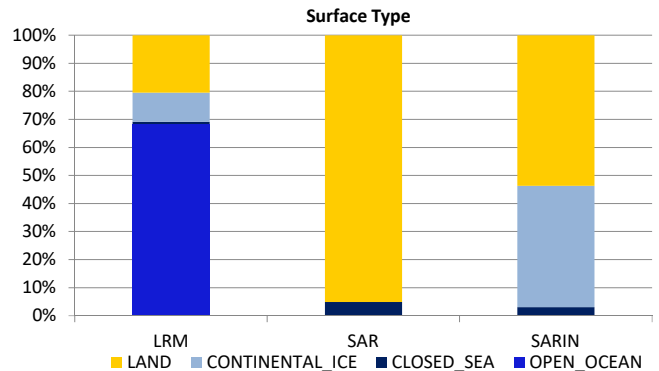
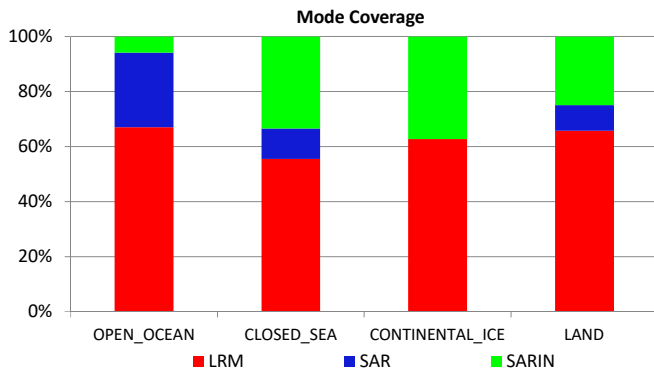
Mission / Instrument News

19-Oct-2019	None
20-Oct-2019	None
21-Oct-2019	Nothing planned

2. Global Coverage



Mode Coverage (%)		
	LRM	66.1
	SAR	20.4
	SARIn	13.5



3. Instrument Configuration

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

SIRAL instrument(s) in use:	SIRAL - A
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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: 0

4.2 L1B Product Header Analysis

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

Number of products with errors: 0

4.3 Star Tracker Usage Check

Each product is checked in order to ensure a valid star tracker file has been used in processing.

Number of products with errors: 0

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: 92

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20191020T001726_20191020T001737_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T001741_20191020T002412_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T002444_20191020T002745_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T003258_20191020T003438_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T003928_20191020T003950_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T011058_20191020T013217_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T020118_20191020T020829_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T020912_20191020T021351_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T023549_20191020T023642_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T023645_20191020T031106_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T041411_20191020T041503_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T041506_20191020T041538_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T041542_20191020T041619_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T041623_20191020T041624_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T041628_20191020T042047_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T042058_20191020T043329_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T043534_20191020T045021_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T050728_20191020T051745_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T051851_20191020T052117_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T052404_20191020T054006_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T055258_20191020T055741_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T055745_20191020T055746_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T055749_20191020T055809_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T055812_20191020T060645_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T064519_20191020T072040_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T073140_20191020T073930_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T074038_20191020T074124_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T074531_20191020T080738_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T081303_20191020T081634_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T081657_20191020T082024_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T082349_20191020T085112_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T085118_20191020T085141_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T085146_20191020T085148_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T085151_20191020T085158_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T091413_20191020T092154_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T092157_20191020T094714_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T105302_20191020T105603_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T105637_20191020T105721_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T105920_20191020T110939_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T111313_20191020T111856_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T123455_20191020T123541_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T123605_20191020T123614_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T124041_20191020T124222_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T124405_20191020T124738_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T124850_20191020T130440_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T132213_20191020T135707_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T135710_20191020T135748_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T135750_20191020T135752_D001	Loss of echo	The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20191020T142507_20191020T144245_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T150156_20191020T151744_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T152316_20191020T153508_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T153511_20191020T153538_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T153541_20191020T153611_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T153614_20191020T153650_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T153653_20191020T153755_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T160933_20191020T161137_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T161140_20191020T162321_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T163128_20191020T163327_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T164103_20191020T165546_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T165747_20191020T170709_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T171006_20191020T171127_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T171130_20191020T171357_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T171400_20191020T171636_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T171639_20191020T171738_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T172822_20191020T174633_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T175236_20191020T175257_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T180225_20191020T180431_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T184307_20191020T184421_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T184816_20191020T184939_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T184941_20191020T184949_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T184953_20191020T184955_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T184957_20191020T185039_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T185043_20191020T185106_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T185109_20191020T185109_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T185113_20191020T185711_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T191211_20191020T194429_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T195038_20191020T195619_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T200047_20191020T202415_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T202807_20191020T203257_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T203313_20191020T203427_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T204955_20191020T205252_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T205545_20191020T205545_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T205553_20191020T205625_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T205632_20191020T212317_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T213944_20191020T220657_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T220702_20191020T220708_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T220711_20191020T220951_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T221025_20191020T221301_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T232621_20191020T233219_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T233329_20191020T234022_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T234557_20191020T234652_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191020T234705_20191020T234934_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: 0

4.6 L1B Auxiliary Data File Usage Check

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

Number of products with errors: 0

4.7 L1B Auxiliary Correction Error Check

CryoSat L1B data includes a correction error flag (field 54) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 0

4.8 L1B Measurement Confidence Data Check

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

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

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

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

Number of products with errors: 0

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: 0

5.2 L2 Product Header Analysis

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

Number of products with errors: 0

5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors: 0

5.4 L2 Auxiliary Correction Error Check

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

Number of products with errors: 0

5.5 L2 Measurement Quality Flag Check

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

Currently, there are several common error flags raised in the Level 2 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: 54

Product	Test Failed	Description
CS_OFFL_SIR_LRM_2__20191020T004252_20191020T004659_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__20191020T005619_20191020T005650_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__20191020T005711_20191020T010812_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__20191020T011058_20191020T013217_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__20191020T015004_20191020T015930_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__20191020T020118_20191020T020829_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__20191020T020912_20191020T021351_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__20191020T023645_20191020T031106_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_2__20191020T033010_20191020T040019_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__20191020T041506_20191020T041538_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2__20191020T041628_20191020T042047_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_2__20191020T042058_20191020T043329_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__20191020T043534_20191020T045021_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__20191020T050728_20191020T051745_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_2__20191020T052404_20191020T054006_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_2__20191020T061111_20191020T061354_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_2__20191020T061533_20191020T062853_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__20191020T064519_20191020T072040_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_2__20191020T073140_20191020T073930_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2__20191020T074531_20191020T080738_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records

