

1. Overview

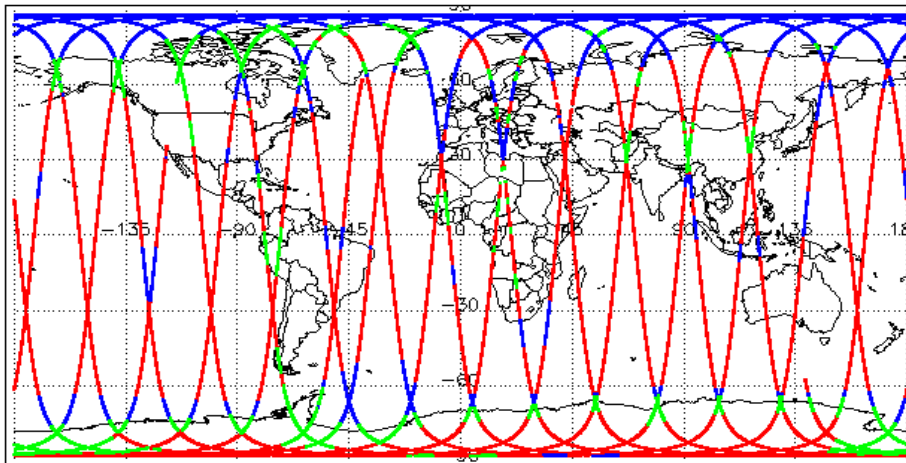
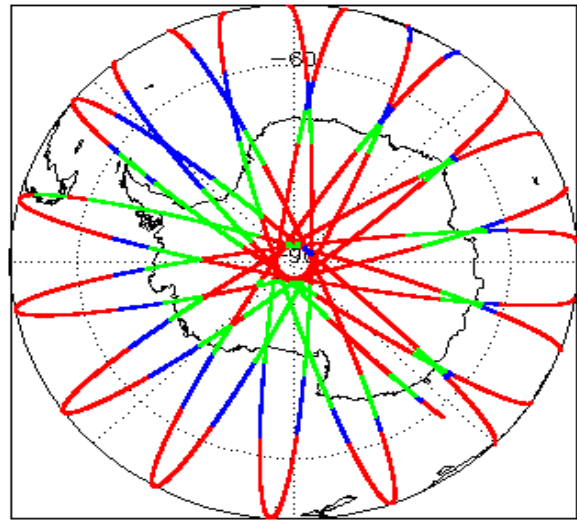
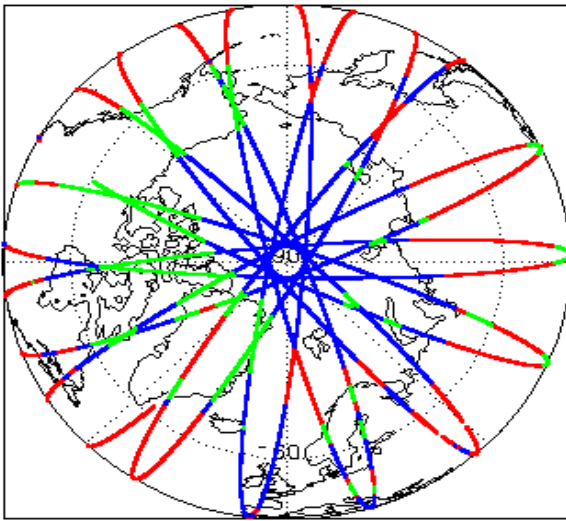
Report Production Date:	19-Jun-2019
Processor Used:	CryoSat Ice Processor
Data Used:	L1B and L2 OFFLINE Data

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	See Section 5.2
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

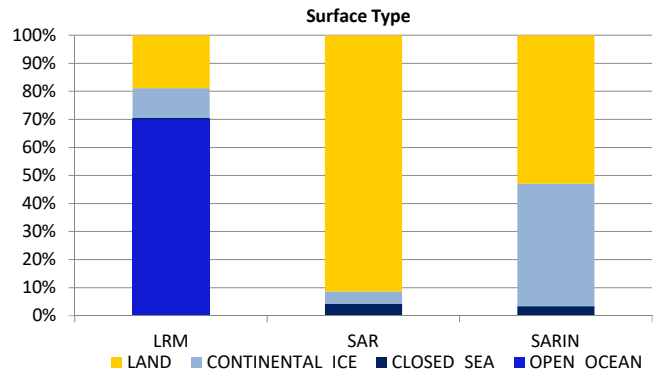
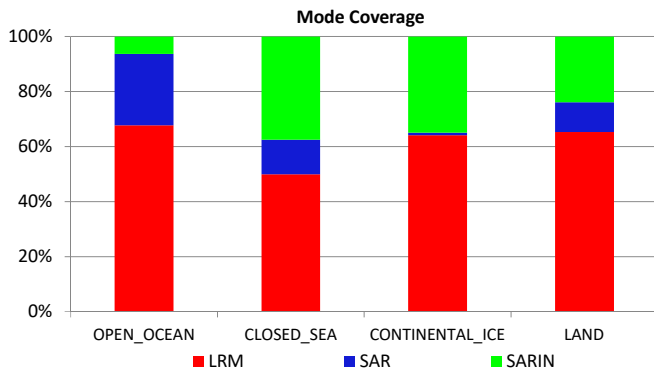
Mission / Instrument News

17-May-2019	SIRAL unavailability on 17-May 2019 from 10:38:13 to 2019-03-01 12:42:26 due to an unplanned ground segment anomaly.
18-May-2019	None
19-May-2019	Nothing planned

2. Global Coverage



Mode Coverage (%)		
	LRM	66.8
	SAR	20.2
	SARIn	12.9



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: 83

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20190518T001748_20190518T003226_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T003932_20190518T004142_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T004844_20190518T010357_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T010558_20190518T011519_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T011648_20190518T012546_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T012652_20190518T012658_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T014238_20190518T015321_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T015323_20190518T015347_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T015351_20190518T015448_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T015954_20190518T021354_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T025150_20190518T025229_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T025617_20190518T025653_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T025747_20190518T025855_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T025859_20190518T030440_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T031649_20190518T031657_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T031948_20190518T032524_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T032645_20190518T035307_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T035906_20190518T040408_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T040749_20190518T043234_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T043432_20190518T044252_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T050418_20190518T050532_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T054616_20190518T061423_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T061425_20190518T061457_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T061555_20190518T061647_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T061651_20190518T061812_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T061846_20190518T062055_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T073346_20190518T073715_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T073838_20190518T074323_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T074343_20190518T074630_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T074658_20190518T074844_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T075511_20190518T075553_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T075659_20190518T075746_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T080002_20190518T080016_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T092654_20190518T093119_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T095315_20190518T095442_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T095530_20190518T102853_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T113148_20190518T113414_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T113813_20190518T114618_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T115059_20190518T115154_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T115158_20190518T120821_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T122536_20190518T123918_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T124132_20190518T125421_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T125452_20190518T125539_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T131029_20190518T131828_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T132100_20190518T133118_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T140733_20190518T141652_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T142016_20190518T142510_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T142754_20190518T143340_D001	Loss of echo	The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20190518T143754_20190518T143757_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T144848_20190518T145637_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T145640_20190518T145646_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T145654_20190518T145704_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T145707_20190518T145712_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T145734_20190518T145822_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T150223_20190518T150251_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T154043_20190518T160825_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T160827_20190518T160905_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T161130_20190518T161359_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T163211_20190518T163722_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T163816_20190518T163838_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T164040_20190518T170607_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T171323_20190518T171650_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T181016_20190518T181331_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T181405_20190518T183512_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T185358_20190518T185552_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T185953_20190518T192251_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T192259_20190518T192300_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T192303_20190518T193257_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T195216_20190518T195401_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T195445_20190518T195526_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T200455_20190518T200821_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T200846_20190518T202436_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T211408_20190518T211522_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T213431_20190518T213603_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T213708_20190518T214159_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T214337_20190518T220243_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T220919_20190518T221144_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T221850_20190518T225128_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T225255_20190518T225411_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T225414_20190518T225516_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T232656_20190518T233941_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T234855_20190518T235051_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20190518T235238_20190518T235555_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: 1

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20190518T163211_20190518T163722_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: 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: 58

Product	Test Failed	Description
CS_OFFL_SIR_LRM_2__20190517T235918_20190518T001534_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__20190518T001748_20190518T003226_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__20190518T004844_20190518T010357_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__20190518T010558_20190518T011519_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__20190518T013953_20190518T014140_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2__20190518T014238_20190518T015321_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__20190518T015954_20190518T021354_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__20190518T022818_20190518T024457_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__20190518T024716_20190518T024928_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__20190518T031649_20190518T031657_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__20190518T032645_20190518T035307_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__20190518T040749_20190518T043234_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__20190518T050418_20190518T050532_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__20190518T050535_20190518T051529_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__20190518T052107_20190518T053154_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__20190518T054616_20190518T061423_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__20190518T062233_20190518T062414_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__20190518T063728_20190518T071051_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__20190518T080109_20190518T080445_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__20190518T081629_20190518T082539_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2), Surface Model Unavailable	There is a height and backscatter error for Retracker 2 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2__20190518T082824_20190518T085030_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__20190518T090440_20190518T091658_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__20190518T091846_20190518T092328_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records

