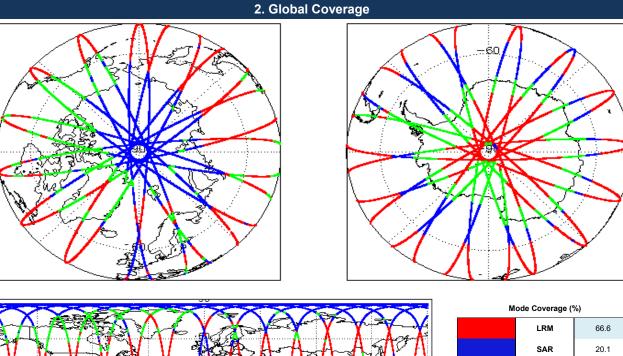


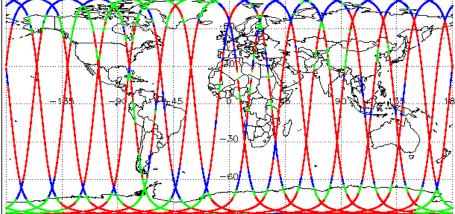
# **QA4EO Daily Report for OFFLINE data:**

<u>29/11/2019</u>

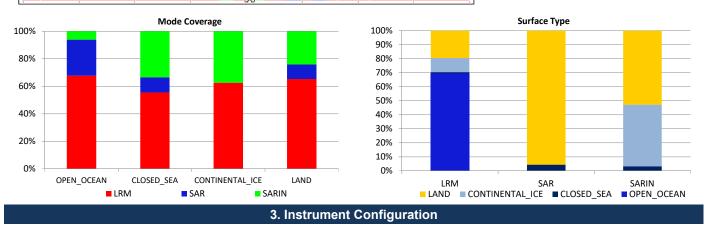
Report Production Date: 06-Jan-2020		Check	Status
Report Production Date.	06-Jan-2020	Server check: science-pds.cryosat.esa.int	Nominal
Processor Used:	CryoSat Ice Processor	Server check: calval-pds.cryosat.esa.int	Nominal
Processor Used.		Product Software Check	Nominal
Data Usadi	L1B and L2 OFFLINE Data	Product Format Check	Nominal
Data Used:		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		
28-Nov-2019	None	
29-Nov-2019	None	
30-Nov-2019	Nothing planned	





LRM	66.6	
SAR	20.1	
SARIn	13.3	



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

SIRAL - A

# 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. 0

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.

0

0

109

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:

•		

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20191129T000754_20191129T004313_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T014624_20191129T014706_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T014709_20191129T014711_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T014714_20191129T014752_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T014755_20191129T014829_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T014833_20191129T014838_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T014842_20191129T014858_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T014901_20191129T020059_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T020540_20191129T020651_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T020654_20191129T020751_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T020806_20191129T022258_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T024028_20191129T025357_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T025611_20191129T025658_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T025806_20191129T031239_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T032518_20191129T032925_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T032933_20191129T032935_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T032938_20191129T032957_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T033000_20191129T033003_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T033007_20191129T033021_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T033027_20191129T033035_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T033039_20191129T033047_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T033053_20191129T033056_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T033100_20191129T033106_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T033109_20191129T033215_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T033217_20191129T033248_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T033538_20191129T034421_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T034424_20191129T034559_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T042333_20191129T043036_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T043500_20191129T043506_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T043509_20191129T043949_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T044233_20191129T044821_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T050334_20191129T050803_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T050807_20191129T050920_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T050924_20191129T050952_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T050957_20191129T051004_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T051011_20191129T051022_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T051025_20191129T051112_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T051116_20191129T051132_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T051137_20191129T051145_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T051148_20191129T051158_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T051205_20191129T051217_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T051221_20191129T051257_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T051657_20191129T051742_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T054456_20191129T054843_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T055557_20191129T062342_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T062552_20191129T062943_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T064651_20191129T065134_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20191129T065305_20191129T065314_D001	Loss of echo	The tracking echo is missing for one or more records
	1	1

CS\_OFFL\_SIR\_LRM\_1B\_20191129T072803\_20191129T073129\_D001 CS OFFL SIR LRM 1B 20191129T082443 20191129T082814 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T082847\_20191129T083046\_D001 CS OFFL SIR LRM 1B 20191129T083052 20191129T083054 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T083057\_20191129T085044\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T090238\_20191129T091033\_D001 CS OFFL SIR LRM 1B 20191129T091607 20191129T094752 D001 CS OFFL SIR LRM 1B 20191129T100247 20191129T100315 D001 CS OFFL SIR LRM 1B 20191129T100651 20191129T100924 D001 CS OFFL SIR LRM 1B 20191129T100935 20191129T101039 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T101610\_20191129T101752\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T101936\_20191129T102233\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T102311\_20191129T102542\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T104210\_20191129T104723\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T111823\_20191129T113002\_D001 CS OFFL SIR LRM 1B 20191129T114913 20191129T115101 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T115116\_20191129T115216\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T115220\_20191129T115627\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T115824\_20191129T120430\_D001 CS OFFL SIR LRM 1B 20191129T130406 20191129T130732 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T130740\_20191129T130833\_D001 CS OFFL SIR LRM 1B 20191129T130837 20191129T130918 D001 CS OFFL SIR LRM 1B 20191129T130921 20191129T131005 D001 CS OFFL SIR LRM 1B 20191129T132159 20191129T135400 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T140336\_20191129T140531\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T141624\_20191129T142758\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T142921\_20191129T144043\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T144322\_20191129T144603\_D001 CS OFFL SIR LRM 1B 20191129T144608 20191129T144939 D001 CS OFFL SIR LRM 1B 20191129T150227 20191129T151839 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T152130\_20191129T152312\_D001 CS OFFL SIR LRM 1B 20191129T152319 20191129T153022 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T154209\_20191129T154450\_D001 CS OFFL SIR LRM 1B 20191129T161514 20191129T162317 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T162319\_20191129T162651\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T162654\_20191129T162936\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T164116\_20191129T164332\_D001 CS OFFL SIR LRM 1B 20191129T164455 20191129T165045 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T165328\_20191129T165606\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T165611\_20191129T171630\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T172002\_20191129T172844\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T173204\_20191129T175604\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T180040\_20191129T180455\_D001 CS OFFL SIR LRM 1B 20191129T182203 20191129T182723 D001 CS OFFL SIR LRM 1B 20191129T182804 20191129T185520 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T191123\_20191129T193739\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T193744\_20191129T193830\_D001 CS OFFL SIR LRM 1B 20191129T193832 20191129T193959 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T194031\_20191129T194533\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T200325\_20191129T203319\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T205840\_20191129T210544\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T210740\_20191129T210750 D001 CS OFFL SIR LRM 1B 20191129T210753 20191129T211236 D001 CS OFFL SIR LRM 1B 20191129T211659 20191129T211753 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T211927\_20191129T212236\_D001 CS OFFL SIR LRM 1B 20191129T214010 20191129T221330 D001 CS OFFL SIR LRM 1B 20191129T224830 20191129T225127 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T225310\_20191129T225608\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T225806\_20191129T225918\_D001 CS OFFL SIR LRM 1B 20191129T225931 20191129T225958 D001 CS\_OFFL\_SIR\_LRM\_1B\_20191129T233130\_20191129T235237\_D001

Loss of echo Loss of echo Loss of echo l oss of echo Loss of echo oss of echo Loss of echo oss of echo Loss of echo l oss of echo Loss of echo l oss of echo Loss of echo oss 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

## 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 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.
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.

2

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_20191129T164455_20191129T165045_D001	IE cho error I RK 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_20191129T165611_20191129T171630_D001	IE cho error I RK 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 Che
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# 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:

#### 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.

54

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:	
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Product	Test Failed	Description
CS_OFFL_SIR_LRM_220191129T000754_20191129T004313_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_220191129T010218_20191129T013400_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_220191129T014901_20191129T020059_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_220191129T020540_20191129T020651_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_220191129T020654_20191129T020751_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_220191129T020806_20191129T022258_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_220191129T024028_20191129T025357_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_220191129T025611_20191129T025658_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_220191129T025806_20191129T031239_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_20191129T033217_20191129T033248_D001       Surface Model Unavailable       No DEM or Slope Model was used for the location or slope Model was used for the locatin distring the location or slope Model was used for the	
CS_OFFL_SIR_LRM_2_20191129T034424_20191129T034559_D001       Error (Retracker 2)       records         CS_OFFL_SIR_LRM_2_20191129T034424_20191129T034559_D001       Height Error (Retracker 2), Backscatter Error (Retracker 2)       There is a height and backscatter error for Retracker records	er 2 for one or more
CS_OFFL_SIR_LRM_2_201911291034424_201911291034559_D001 Error (Retracker 2) records	
Height Error (Patracker 2) Backscatter There is a height and backscatter error for Patracker	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T034739_20191129T040129_D001 Error (Retracker 2) Error (Retracker 2) records	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T041800_20191129T041912_D001 Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter error for Retracker error for Retracker 2)	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T042333_20191129T043036_D001 Height Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2)	er 2 and a height error
CS_OFFL_SIR_LRM_2_20191129T043509_20191129T043949_D001 Height Error (Retracker 2), Hei	er 2 and a height error
CS_OFFL_SIR_LRM_2_20191129T044233_20191129T044821_D001 Height Error (Retracker 2), Backscatter Error (Retracker 2) There is a height and backscatter error for Retracker records	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T044943_20191129T045031_D001 Height Error (Retracker 2), Backscatter Error (Retracker 2) There is a height and backscatter error for Retracker records	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T051011_20191129T051022_D001 Surface Model Unavailable No DEM or Slope Model was used for the location or	of one or more records
CS_OFFL_SIR_LRM_2_20191129T051850_20191129T054005_D001 Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2) There is a height and backscatter error for Retracker error for Retracker 2)	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T055557_20191129T062342_D001 Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2) There is a height and backscatter error for Retracker 2 records	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T065537_20191129T071919_D001 Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) for Retracker 3 for one or more records	er 2 and a height error
CS_OFFL_SIR_LRM_2_20191129T073532_20191129T080756_D001 Height Error (Retracker 2), Backscatter Error (Retracker 2) There is a height and backscatter error for Retracker 2) records	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T083057_20191129T085044_D001 Height Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Re	er 2 and a height error
CS_OFFL_SIR_LRM_2_20191129T091607_20191129T094752_D001       (Retracker 2), Backscatter       There is a height and backscatter error for Retracker         CS_OFFL_SIR_LRM_2_20191129T091607_20191129T094752_D001       There is a height and backscatter error for Retracker	
CS_OFFL_SIR_LRM_2_20191129T102832_20191129T103632_D001 Height Error (Retracker 2), Backscatter Error (Retracker 2) There is a height and backscatter error for Retracker 2)	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T105422_20191129T111537_D001 Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2) There is a height and backscatter error for Retracker 2 records	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T111823_20191129T113002_D001 Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2) There is a height and backscatter error for Retracker error for Retracker 2)	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T115824_20191129T120430_D001 Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	er 2 and a height error
CS_OFFL_SIR_LRM_2_20191129T120618_20191129T121633_D001 Height Error (Retracker 2), Backscatter Precords There is a height and backscatter error for Retracker 2)	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T123345_20191129T130342_D001 Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) for Retracker 3 for one or more records	er 2 and a height error
CS_OFFL_SIR_LRM_2_20191129T130406_20191129T130732_D001 Height Error (Retracker 2), Backscatter Error (Retracker 2) There is a height and backscatter error for Retracker 2) records	er 2 for one or more
CS_OFFL_SIR_LRM_220191129T130740_20191129T130833_D001 Surface Model Unavailable No DEM or Slope Model was used for the location or	of one or more records
CS_OFFL_SIR_LRM_2_20191129T132159_20191129T135400_D001 Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker 2) There is a height and backscatter error for Retracker 2 records	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T141624_20191129T142758_D001 Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error for Retracker 3 for one or more records	er 2 and a height error
CS_OFFL_SIR_LRM_2_20191129T142921_20191129T144043_D001 (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error	er 2 and a height error
CS_OFFL_SIR_LRM_2_20191129T150227_20191129T151839_D001 (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error	er 2 and a height error
CS_OFFL_SIR_LRM_2_20191129T155212_20191129T160624_D001     Height Error (Retracker 2), Backscatter Error (Retracker 2)     There is a height and backscatter error for Retracker records	er 2 for one or more
CS_OFFL_SIR_LRM_2_20191129T160803_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T160803_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T160803_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T160803_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T160803_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T160803_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T160803_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T161047_D001 CS_OFFL_SIR_LRM_20_20191129T161047_D001 CS_OFFL_SIR_LRM_2000000000000000000000000000000000000	er 2 and a height error
CS_OFFL_SIR_LRM_220191129T161514_20191129T162317_D001 Surface Model Unavailable No DEM or Slope Model was used for the location o	of one or more records
CS_OFFL_SIR_LRM_220191129T162319_20191129T162651_D001 Surface Model Unavailable No DEM or Slope Model was used for the location o	
CS_OFEL_SIR_LRM_2_20191120T164116_20191120T164332_D001 Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error	
CS_OFEL_SIR_LRM_2_20191129T164455_20191129T165045_D001Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker	er 2 for one or more
CS_OFEL_SIR_LRM_2_20191120T165328_20191120T165606_D001 Height Error (Retracker 2), Backscatter There is a height and backscatter error for Retracker	er 2 for one or more
Error (Retracker 2) 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)	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), 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), 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)	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), 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 e 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
	(Retracker 3), Backscatter Error         (Retracker 2)         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), Height Error         (Retracker 2)         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 3), Backscatter Error         (Retracker 3), Backscatter Error         (Retracker 2), Height Error (Retracker 2), Height Error         Height Error (Retracker 2), Surface Model Unavailable         Height Error (Retracker 2), Backscatter Error