

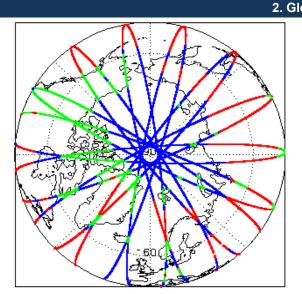
## **QA4EO Daily Report for OFFLINE data:**

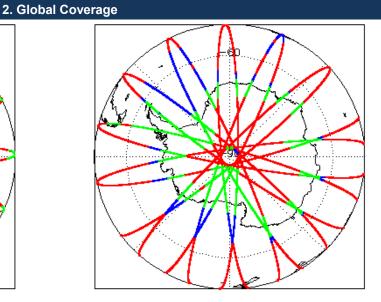
23/04/2020

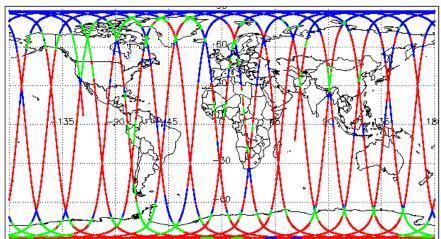
## 1. Overview

| Demant Breduction Dates | 22-May-2020             | Check                                      | Status                  |
|-------------------------|-------------------------|--|-------------------------|
| Report Production Date: |                         | Server check: science-pds.cryosat.esa.int  | Nominal                 |
| Processor Used:         | CryoSat Ice Processor   | Server check: calval-pds.cryosat.esa.int   | Nominal                 |
|                         |                         | Product Software Check                     | Nominal                 |
| Data Used:              | L1B and L2 OFFLINE Data | Product Format Check                       | Nominal                 |
| Data Oseu.              |                         | 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 22-Apr-2020 Due to an incident on the SSALTO data server, AUX and AUXI production was delayed for 24 hours 23-Apr-2020 Due to an incident on the SSALTO data server, AUX and AUXI production was delayed for 24 hours 24-Apr-2020 Nothing planned

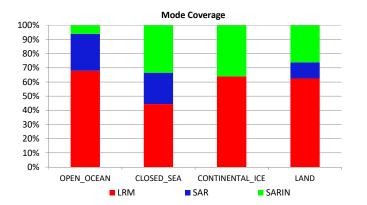


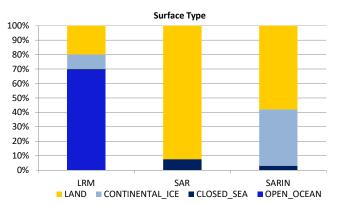






| LRM   | 66.2 |
|-------|------|
| SAR   | 20.3 |
| SARIn | 13.5 |





## 3. Instrument Configuration

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

SIRAL - A

SIRAL instrument(s) in use:

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. 0

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.

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#### Number of products with errors:

| Product   | Test Failed  | Description  |
|---|--------------|--|
| CS_OFFL_SIR_LRM_1B_20200423T002835_20200423T003755_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T003757_20200423T010457_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T011127_20200423T011457_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T020613_20200423T020726_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T020928_20200423T021143_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T021216_20200423T021308_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T021454_20200423T021556_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T021739_20200423T022612_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T022716_20200423T023143_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T023150_20200423T023523_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T024624_20200423T025150_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T035134_20200423T035224_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T035515_20200423T040043_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T042549_20200423T043048_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T043648_20200423T050938_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T051227_20200423T051236_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T051238_20200423T051353_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T061654_20200423T063249_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T063855_20200423T064717_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T064719_20200423T064730_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T064734_20200423T064735_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T065020_20200423T065143_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T065149_20200423T065153_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T065155_20200423T065202_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T065206_20200423T065315_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T072508_20200423T073952_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T074653_20200423T074904_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T075552_20200423T081113_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T081317_20200423T082237_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T082307_20200423T082839_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T082841_20200423T082916_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T082918_20200423T083157_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T083202_20200423T083303_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T084720_20200423T084901_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T085004_20200423T090208_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T090708_20200423T092151_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T095916_20200423T095947_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T100334_20200423T100408_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T100508_20200423T100648_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T100650_20200423T101158_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200423T102405_20200423T102419_D001 | Loss of echo | The tracking echo is missing for one or more records |

CS OFFL SIR LRM 1B 20200423T102707 20200423T103232 D001 CS OFFL SIR LRM 1B 20200423T103411 20200423T103727 D001 CS OFFL SIR LRM 1B 20200423T103730 20200423T103730 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T103732\_20200423T110106\_D001 CS OFFL SIR LRM 1B 20200423T110629 20200423T111127 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T111425\_20200423T114000\_D001 CS OFFL SIR LRM 1B 20200423T114149 20200423T114945 D001 CS OFFL SIR LRM 1B 20200423T114947 20200423T114950 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T114952 20200423T115008 D001 CS OFFL SIR LRM 1B 20200423T125321 20200423T132215 D001 CS OFFL SIR LRM 1B 20200423T132320 20200423T132350 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T132412\_20200423T132531\_D001 CS OFFL SIR LRM 1B 20200423T132604 20200423T132754 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T144105\_20200423T144437\_D001 CS OFFL SIR LRM 1B 20200423T144559 20200423T145041 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T145103\_20200423T145234\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T145418\_20200423T145559\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T150238\_20200423T150251\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T150254\_20200423T150306\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T150347\_20200423T150358\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T150710\_20200423T150726\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T162607\_20200423T163203\_D001 CS OFFL SIR LRM 1B 20200423T163412 20200423T163745 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T163747\_20200423T163839\_D001 CS OFFL SIR LRM 1B 20200423T170034 20200423T170203 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T183908\_20200423T184006\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T184013\_20200423T184032\_D001 CS OFFL SIR LRM 1B 20200423T184034 20200423T184055 D001 CS OFFL SIR LRM 1B 20200423T184059 20200423T184132 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T184606\_20200423T185338\_D001 CS OFFL SIR LRM 1B 20200423T185819 20200423T185918 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T185920\_20200423T191556\_D001 CS OFFL SIR LRM 1B 20200423T193253 20200423T194639 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T194916\_20200423T200043\_D001 CS OFFL SIR LRM 1B 20200423T200208 20200423T200308 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T201747\_20200423T202117\_D001 CS OFFL SIR LRM 1B 20200423T202119 20200423T202235 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T202241\_20200423T202310\_D001 CS\_OFEL\_SIR\_LRM\_1B\_20200423T202315\_20200423T202556\_D001 CS OFFL SIR LRM 1B 20200423T202820 20200423T203744 D001 CS OFFL SIR LRM 1B 20200423T211434 20200423T212436 D001 CS OFFL SIR LRM 1B 20200423T212716 20200423T213230 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T213513\_20200423T214208\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T214509\_20200423T214519\_D001 CS OFFL SIR LRM 1B 20200423T215609 20200423T220234 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T220237\_20200423T220313\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T220315\_20200423T220349\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T220351\_20200423T220409\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T220411\_20200423T220424\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T220428\_20200423T220429\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T220457\_20200423T220543\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T220943\_20200423T221011\_D001 CS OFFL SIR LRM 1B 20200423T224740 20200423T231428 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T231431\_20200423T231541\_D001 CS OFFL SIR LRM 1B 20200423T231546 20200423T231625 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T231907\_20200423T232031\_D001 CS OFFL SIR LRM 1B 20200423T233930 20200423T234501 D001 CS OFFL SIR LRM 1B 20200423T234531 20200423T234559 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T234753\_20200423T234839\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200423T234844\_20200424T001346\_D001

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

#### 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:
0

rumber 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: 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:

#### 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.

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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:

| Product   | Test Failed  | Description   |
|---|--|---|
| CS_OFFL_SIR_LRM_220200422T233826_20200423T000550_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)   | There is a height and backscatter error for Retracker 2 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T003757_20200423T010457_D001 | Height Error (Retracker 2), Height Error<br>(Retracker 3), Backscatter Error<br>(Retracker 2)                            | There is a height and backscatter error for Retracker 2 and a height error<br>for Retracker 3 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T011816_20200423T015254_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)   | There is a height and backscatter error for Retracker 2 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T020613_20200423T020726_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)   | There is a height and backscatter error for Retracker 2 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T025743_20200423T031954_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)   | There is a height and backscatter error for Retracker 2 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T032239_20200423T033123_D001 | Height Error (Retracker 2), Height Error<br>(Retracker 3), Backscatter Error<br>(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_220200423T034433_20200423T034728_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)   | There is a height and backscatter error for Retracker 2 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T040352_20200423T042328_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)   | There is a height and backscatter error for Retracker 2 for one or more<br>records  |
| CS_OFFL_SIR_LRM_220200423T043648_20200423T050938_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)   | There is a height and backscatter error for Retracker 2 for one or more<br>records  |

| CH, UR, URAL J. 2004.01101 002.000000104.0010Perspection of the second control of the   | CS_OFFL_SIR_LRM_220200423T053519_20200423T055824_D001  | Height Error (Retracker 2), Height Error<br>(Retracker 3), Backscatter Error<br>(Retracker 2) | There is a height and backscatter error for Retracker 2 and a height error<br>for Retracker 3 for one or more records |
|---|--|---|---|
| Control         Parts         Parts         Parts         Parts         Parts           Carpert         Parts         Parts <td< td=""><td>CS_OFFL_SIR_LRM_220200423T061654_20200423T063249_D001</td><td>Height Error (Retracker 2), Backscatter</td><td></td></td<>  | CS_OFFL_SIR_LRM_220200423T061654_20200423T063249_D001  | Height Error (Retracker 2), Backscatter   |   |
| Circle, Sing, Lenk 2, 2009-201700000, 2009-20170004, DDI         Circle (Seek 2, See 1, See 1, See 2, See 1, See 2, S  | CS_OFFL_SIR_LRM_220200423T063253_20200423T063414_D001  |   |   |
| Carr, Serie, Nat. J., 200000371103000, 200003710310, 2001         Carr ( Series )         Honds           Ser, Series (Series )         Series (Series (Series ) <td>CS_OFFL_SIR_LRM_220200423T063855_20200423T064717_D001</td> <td></td> <td></td>  | CS_OFFL_SIR_LRM_220200423T063855_20200423T064717_D001  |   |   |
| Display Language   | CS_OFFL_SIR_LRM_220200423T070655_20200423T072254_D001  |   | -   |
| GL_OPT_UBL_INU200000370801100000       Release 1: being the second provided of the second prov   | CS_0FFL_SIR_LRM_220200423T072508_20200423T073952_D001  |   |   |
| DS_OFTL_SRI_UNL2_ADDODDSTINUED_TODI       Implicit Core_Treason of the State of a Distance of a Distance of Core of Presson of a Distance of Core of Presson of Cor  | CS_0FFL_SIR_LRM_220200423T075552_20200423T081113_D001  | (Retracker 3), Backscatter Error  |   |
| Cite         Cite <th< td=""><td>CS_OFFL_SIR_LRM_220200423T081317_20200423T082237_D001</td><td>Height Error (Retracker 2), Height Error<br/>(Retracker 3), Backscatter Error</td><td></td></th<>  | CS_OFFL_SIR_LRM_220200423T081317_20200423T082237_D001  | Height Error (Retracker 2), Height Error<br>(Retracker 3), Backscatter Error                  |   |
| M.J.T. (BRL) M.Z. 2000/431108300_00001         Entry (Batacker 7)         Houses           GG, GPFL_SRL, LMA_2_0000431108300_00001         Height Entry (Batacker 7)         Rates is height and backscatter entry for Relatacker 2 for one or more           GG, GPFL_SRL, LMA_2_0000431108300_00001         Height Entry (Relatacker 7)         Rates is height and backscatter entry for Relatacker 2 for one or more           GG, GPFL_SRL, LMA_2_0000431108300_00001         Safasee Mand Usavalable         No DEM to Slage Model area and for Relatacker 2 for one or more           GG, GPFL_SRL, LMA_2_0000431108300_00001         Safasee Mand Usavalable         No DEM to Slage Model area and for Relatacker 2 for one or more           GG, GPFL_SRL, LMA_2_00004311102419_00001         Height Entry (Relatacker 7)         Relatacker 7)           GG, GPFL_SRL, LMA_2_00004311102419_00001         Height Entry (Relatacker 7)         Relatacker 7)           GG, GPFL_SRL, LMA_2_00004321110240_00001         Height Entry (Relatacker 7)         Relatacker 7)           GG, GPFL_SRL, LMA_2_00004321110400_00001         Height Entry (Relatacker 7)         Relatacker 7)           GG, GPFL_SRL, LMA_2_00004221110400_00001         Height Entry (Relatacker 7)         Relatacker 7)           GG, GPFL_SRL, LMA_2_00004221110400_00001         Height Entry (Relatacker 7)         Relatacker 80           GG, GPFL_SRL, LMA_2_00004221110400_00001         Height Entry (Relatacker 7)         Relatacker 80           GG, G   | CS_OFFL_SIR_LRM_220200423T084720_20200423T084901_D001  | , ,   | No DEM or Slope Model was used for the location of one or more records  |
| Carl, Dirit, Sim, Link, 2., 20204221103258, 20204221103259, 2020422111020, 20211, 2020422111030, 20211, 2020422111030, 20211, 2020422111030, 20211, 2020422111030, 20211, 2020422111030, 20211, 2020422111030, 20211, 2020422111030, 20211, 20204221111429, 202042211112324, 20204221111429, 202042211112324, 20204221112324, 202014221112344, 20201422111111, 202004221110344, 202004221110344, 2020042211110342, 2020   | CS_OFFL_SIR_LRM_220200423T085004_20200423T090208_D001  |   |   |
| CPUT_SIL_SIL_SIL_SIL_20004231106102_L0004211100144_D001         Enrol (Retarder 2)         records           CS_OFFL_SIL_URL_2_20004231100103_20004231100144_D001         Surface More) Linearizable         No DEM or Steps Model was used for the totalen of one or more excerts           CS_OFFL_SIL_URL_2_20004231100103_20004231100144_D001         Surface More) Linearizable         No DEM or Steps Model was used for the totalen of one or more excerts           CS_OFFL_SIL_URL_2_20004231100103_20004231100100_D001         Evelopt Error (Reindord 2), Badacatter         There is a height and backstatter error for Retracker 2 and a height error (Reindord 2), Badacatter           CS_OFFL_SIL_URL_2_20004231100372_D001         Height Error (Reindord 2), Badacatter         There is a height and backstatter error for Retracker 2 and a height error (Reindord 2), Badacatter           CS_OFFL_SIL_URL_2_20004231110372_D0004231110100_D001         Height Error (Reindord 2), Height Error (Reindord 2), Badacatter           Reside         Sinder Error (Reindord 2), Badacatter         There is a height and backstatter error for Retracker 2 and a height error for formatics 2 and a height error (Reindord 2) and a  | CS_OFFL_SIR_LRM_220200423T090708_20200423T092151_D001  |   |   |
| Correl_sin_LifeX_2_councestinates       proofs         CS_OFFL_SIN_LEK_2_councestinates       proofs </td <td>CS_OFFL_SIR_LRM_220200423T093530_20200423T095234_D001</td> <td></td> <td></td>  | CS_OFFL_SIR_LRM_220200423T093530_20200423T095234_D001  |   |   |
| High End (Return 2, 1020042110240, 2020042110241, 2020042110241, 2020042110241, 2020042110241, 202004211027, 2001         High End (Return 2), Backstatter End (Retur 2), Backstatter End (Return 2), Backstatter End (Return   | CS_OFFL_SIR_LRM_220200423T095327_20200423T095738_D001  |   |   |
| CS_OFFL_SR_LERV_2_2000423110440_20004231102140_0001       (Petnader 2)       Inter a magin induction model on backstate more for Retracker 2 for one or more scools         CS_OFFL_SR_LERV_2_2000423110372_200042311005_0001       Height Enr (Retracker 2), Beakstate Enr (Retracker 2  | CS_OFFL_SIR_LRM_220200423T100508_20200423T100648_D001  | Surface Model Unavailable   | No DEM or Slope Model was used for the location of one or more records  |
| CS_OFFL_SRL_EM_2_200004231103112_20001       Error (Retracker 2)       House         CS_OFFL_SRL_EM_2_200204231103732_202004231114000_D001       Retracker 2)       House       There is a height and backscatter error for Retracker 2 and a height error (Retracker 2)         CS_OFFL_SRL_EM_2_200200423111425_202004231114000_D001       Retracker 2)       House is a height and backscatter error for Retracker 2 and a height error (Retracker 2)         CS_OFFL_SRL_EM_2_2002004231114169_202001221114945_D001       Surface Model Unuvaliable       No DEM or Slope Model was used for the location of one or more records         CS_OFFL_SRL_EM_2_200200423111264_202004231112844_D001       Error (Retracker 2), Reducker 2)       No DEM or Slope Model was used for the location of one or more records         CS_OFFL_SRL_EM_2_200200423113284_202004231132816_D001       Height Error (Retracker 2), Height Error (Retracke   | CS_OFFL_SIR_LRM_220200423T102405_20200423T102419_D001  | (Retracker 3), Backscatter Error  |   |
| CS_OFFL_SIR_LRM_2_20200423T103732_20200423T10106_D001       (Reincker 2)<br>(Reincker 2)       Indext a hight ind backscatter error for Retracker 2 and a hight error<br>(Reincker 2)         CS_OFFL_SIR_LRM_2_20200423T114169_20200423T114005_D001       Height Error (Reincker 2), Height Error<br>(Reincker 2)       No DEM or Slope Model was used for the retracker 2 and a height error<br>(Reincker 2)         CS_OFFL_SIR_LRM_2_20200423T114169_20200423T114005_D001       Surface Model Unavailable       No DEM or Slope Model was used for the location of one or more records         CS_OFFL_SIR_LRM_2_20200423T125321_20200423T123544_D001       Height Error (Reincker 2), Backscatter<br>Error (Reincker 2), Backscatter<br>Error (Reincker 2), Backscatter<br>(Reincker 2)       There is a height and backscatter error for Reincker 2 and a height error<br>for fertacker 3 for one or more records         CS_OFFL_SIR_LRM_2_20200423T125321_20200423T132255_D001       Height Error (Reincker 2), Height Error<br>(Reincker 2)       There is a height and backscatter error for Reincker 2 and a height error<br>for fertacker 3 for one or more records         CS_OFFL_SIR_LRM_2_20200423T13265_D001       Height Error (Reincker 2), Height Error<br>(Reincker 2)       There is a height and backscatter error for Reincker 2 and a height error<br>for fertacker 3 for one or more records         CS_OFFL_SIR_LRM_2_20200423T150251_D001       Height Error (Reincker 2), Backscatter<br>Error (Reincker 2)       There is a height and backscatter error for Reincker 2 for one or more<br>records         CS_OFFL_SIR_LRM_2_20200423T150261_D0010       Height Error (Reincker 2), Backscatter<br>Error (Reincker 2)       Height Error (Reincker 2), Backscatter<br>Error   | CS_OFFL_SIR_LRM_220200423T103411_20200423T103727_D001  |   |   |
| CS_OFFL_SIR_LRM_2_20200423T111425_20200423T11440_000001       (Retracker 2)         CS_OFFL_SIR_LRM_2_20200423T11446_00200423T114845_D001       Surface Model Unavailable       No DEM or Slope Model was used for the location of one or more records         CS_OFFL_SIR_LRM_2_20200423T112124_20200423T112384_D001       Height Error (Retracker 2), Backscatter Error (Retracker 2),   | CS_OFFL_SIR_LRM_220200423T103732_20200423T110106_D001  | (Retracker 3), Backscatter Error  |   |
| CS_OFFL_SIR_LRM_2_20200423T121254_20200423T132215_D001       Height Error (Retracker 2)       There is a height and backscatter error for Retracker 2 for one or more         CS_OFFL_SIR_LRM_2_20200423T132215_D001       (Retracker 2)       There is a height and backscatter error for Retracker 2 and a height error (Retracker 2)         CS_OFFL_SIR_LRM_2_20200423T132944_20200423T133127_D001       (Retracker 2)       There is a height and backscatter error for Retracker 2 and a height error (Retracker 2)         CS_OFFL_SIR_LRM_2_20200423T13244_20200423T133127_D001       (Retracker 2)       There is a height and backscatter error for Retracker 2 and a height error (Retracker 2)         CS_OFFL_SIR_LRM_2_20200423T13244_20200423T131424_D001       Height Error (Retracker 2).       There is a height and backscatter error for Retracker 2 for one or more         CS_OFFL_SIR_LRM_2_20200423T16028_20200423T162051_D001       Height Error (Retracker 2).       There is a height and backscatter error for Retracker 2 for one or more         CS_OFFL_SIR_LRM_2_20200423T16221_20200423T163268_D001       Height Error (Retracker 2).       There is a height and backscatter error for Retracker 2 for one or more         CS_OFFL_SIR_LRM_2_20200423T163248_D0200423T163268_D001       Height Error (Retracker 2).       There is a height and backscatter error for Retracker 2 for one or more         CS_OFFL_SIR_LRM_2_20200423T162419_D020423T163268_D001       Height Error (Retracker 2).       There is a height and backscatter error for Retracker 2 for one or more         CS_OFFL_SIR_LRM_2_20200423T162419_D001       Hei  | CS_OFFL_SIR_LRM_220200423T111425_20200423T114000_D001  | (Retracker 3), Backscatter Error  |   |
| US_OFFL_SIR_LRM_2_20200423112155_02001       Error (Retracker 2)       recods         CS_OFFL_SIR_LRM_2_20200423T132215_D001       Height Error (Ritracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatte Error (Retracker 2), Eachscatte Error (R  | CS_OFFL_SIR_LRM_220200423T114149_20200423T114945_D001  | Surface Model Unavailable   | No DEM or Slope Model was used for the location of one or more records  |
| CS_OFFL_SIR_LRM_2_20200423T13215_0001       (Refracker 3), Backscatter Error<br>(Retracker 2)       Index 5 as height and backscatter error for Retracker 2 and a height error<br>for Retracker 3 and a neight error<br>(Retracker 2), Height Error (Retracker 2), Height Error<br>(Retracker 2), Backscatter error for Retracker 2 and a height error<br>for Retracker 3 and backscatter error for Retracker 2 and a height error<br>for Retracker 3 and backscatter error for Retracker 2 and a height error<br>for Retracker 3 for one or more records         CS_OFFL_SIR_LRM_2_20200423T132443_20200423T150251_D001       Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)       There is a height and backscatter error for Retracker 2 for one or more<br>records         CS_OFFL_SIR_LRM_2_20200423T150231_00201       Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)       There is a height and backscatter error for Retracker 2 for one or more<br>records         CS_OFFL_SIR_LRM_2_20200423T150281_002001       Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)       There is a height and backscatter error for Retracker 2 for one or more<br>records         CS_OFFL_SIR_LRM_2_20200423T153564_00200423T153568_0001       Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)       There is a height and backscatter error for Retracker 2 for one or more<br>records         CS_OFFL_SIR_LRM_2_20200423T163264_00200423T162419_0001       Height Error (Retracker 2), Height Error<br>(Retracker 2)       There is a height and backscatter error for Retracker 2 for one or more<br>records         CS_OFFL_SIR_LRM_2_20200423T162607_20200423T162419_0001       Height Error (Retracker 2), Height Error<br>(Retracker 2), Backscatter<br>Error (Retracker 2), Backscatter error for Retr   | CS_OFFL_SIR_LRM_220200423T121254_20200423T123944_D001  |   | 5   |
| CS_OFFL_SIR_LRM_2_20200423T132944_20200423T13127_D001       (Reiracker 2)         CS_OFFL_SIR_LRM_2_20200423T132944_20200423T141844_D001       Height Error (Retracker 2)         CS_OFFL_SIR_LRM_2_20200423T150238_20200423T141844_D001       Height Error (Retracker 2)         CS_OFFL_SIR_LRM_2_20200423T150238_20200423T150251_D001       Height Error (Retracker 2)         Backscatter       There is a height and backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T15028_20200423T150251_D001       Height Error (Retracker 2), Backscatter         CS_OFFL_SIR_LRM_2_20200423T15028_20200423T153258_D001       Height Error (Retracker 2), Backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T152419_20200423T153258_D001       Height Error (Retracker 2), Backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T163245_20200423T153568_D001       Height Error (Retracker 2), Backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T163164_20200423T163203_D001       Height Error (Retracker 2), Backscatter error for Retracker 2 and a height error (Retracker 2), Backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T162607_20200423T163203_D001       Height Error (Retracker 2), Backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T170258_20200423T178203_D001       Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2), Backsca   | CS_OFFL_SIR_LRM_2_20200423T125321_20200423T132215_D001 | (Retracker 3), Backscatter Error  |   |
| CS_OFFL_SIR_LRM_2_20200423T150238_20200423T150251_D001       Error (Retracker 2)       records         CS_OFFL_SIR_LRM_2_20200423T150238_20200423T150251_D001       Height Error (Retracker 2), Backscatter       There is a height and backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T150251_D001       Height Error (Retracker 2), Backscatter       There is a height and backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T153258_D001       Height Error (Retracker 2), Backscatter       There is a height and backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T153544_20200423T155806_D001       Height Error (Retracker 2), Backscatter Error (Retracker   | CS_OFFL_SIR_LRM_220200423T132944_20200423T133127_D001  | (Retracker 3), Backscatter Error  |   |
| CS_OFFL_SIR_LRM_2_202004231150236_202004231150236_202004231151200_D001       Error (Retracker 2)       records         CS_OFFL_SIR_LRM_2_202004231150231_202004231151200_D001       Height Error (Retracker 2), Backscatter       There is a height and backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_202004231152419_202004231153256_D001       Height Error (Retracker 2), Backscatter       There is a height and backscatter error for Retracker 2 or one or more records         CS_OFFL_SIR_LRM_2_202004231153544_202004231155806_D001       Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Height Error (Re  | CS_OFFL_SIR_LRM_220200423T134443_20200423T141844_D001  |   |   |
| Error (Retracker 2)       records         CS_OFFL_SIR_LRM_2_20200423T150419_20200423T153258_D001       Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Backscatter Error (Retracker 2), Height Error (Retracker 2), Backscatter Error (Retracker 2), Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2), Height Error (Retracker 2)   | CS_OFFL_SIR_LRM_220200423T150238_20200423T150251_D001  |   |   |
| CS_OFFL_SIR_LRM_2_20200423T153544_20200423T155806_D001       Error (Retracker 2)       records         CS_OFFL_SIR_LRM_2_20200423T155544_20200423T155806_D001       Height Error (Retracker 2), Height Error (Retracker 2), Backscatter Error for Retracker 2 and a height error (Retracker 2)         CS_OFFL_SIR_LRM_2_20200423T162607_20200423T162603_D001       Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter error for Retracker 2 for one or more error for Retracker 2 and a height error (Retracker 2)         CS_OFFL_SIR_LRM_2_20200423T162607_20200423T163203_D001       Height Error (Retracker 2), Backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T170258_20200423T173623_D001       (Retracker 2), Height Error for Retracker 2) for one or more records         CS_OFFL_SIR_LRM_2_20200423T1865818_D001       (Retrack  | CS_OFFL_SIR_LRM_220200423T150821_20200423T151200_D001  |   |   |
| CS_OFFL_SIR_LRM_2_20200423T153544_20200423T155806_D001       (Retracker 3), Backscatter Error (Retracker 2)       Integrin and backscatter error for Retracker 2 and a height error (Retracker 2)         CS_OFFL_SIR_LRM_2_20200423T161113_20200423T162419_D001       Height Error (Retracker 2), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Backscatter Error (Re  | CS_OFFL_SIR_LRM_220200423T152419_20200423T153258_D001  | Error (Retracker 2)   |   |
| CS_OFFL_SIR_LRM_2_20200423T161113_20200423T162419_D001       Error (Retracker 2)       records         CS_OFFL_SIR_LRM_2_20200423T162607_20200423T163203_D001       Height Error (Retracker 2), Backscatter       There is a height and backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T170258_20200423T173623_D001       (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 2), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Backscatter error for Retracker 2 for one or more records         CS_OFFL_SIR_LRM_2_20200423T185819_20200423T185918_D001       Error (Retracker 2), Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2), Ba   | CS_OFFL_SIR_LRM_220200423T153544_20200423T155806_D001  | (Retracker 3), Backscatter Error  |   |
| CS_OFFL_SIR_LRM_2_20200423T182600_20200423T185203_D001       Error (Retracker 2)       records         CS_OFFL_SIR_LRM_2_20200423T170258_20200423T173623_D001       Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Backscatter Error (Retracker 2), Height Error (Retracker 2), Backscatter Error (Retracker 2), Error (Retracker 2), Backscatter Error (Retracker 2), Error (Retracker 2), Error (Retracker 2), Backscatter Error (Retracker 2), Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2), Error (Retracker 2), Backscatter Error for Retracker 2 and a height error records   | CS_OFFL_SIR_LRM_220200423T161113_20200423T162419_D001  |   |   |
| CS_OFFL_SIR_LRM_2_20200423T170258_20200423T173623_D001       (Retracker 3), Backscatter Error<br>(Retracker 2), Height Error<br>(Retracker 2), Backscatter Error<br>(Retracker 3), Backscatter Error<br>(Re | CS_OFFL_SIR_LRM_220200423T162607_20200423T163203_D001  | Error (Retracker 2)   |   |
| CS_OFFL_SIR_LRM_2_20200423T175500_20200423T182606_D001       (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 2), Backscatter Error (Retracker 3), Bac  | CS_OFFL_SIR_LRM_220200423T170258_20200423T173623_D001  | (Retracker 3), Backscatter Error<br>(Retracker 2)   |   |
| CS_OFFL_SIR_LRM_2_20200423T184606_20200423T185338_D001       (Retracker 3), Backscatter Error<br>(Retracker 2)       There is a height and backscatter error for Retracker 2 and a height error<br>for Retracker 2)         CS_OFFL_SIR_LRM_2_20200423T185819_20200423T185918_D001       Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)       There is a height and backscatter error for Retracker 2 and a height error<br>records         CS_OFFL_SIR_LRM_2_20200423T185920_20200423T19556_D001       Height Error (Retracker 2), Height Error<br>(Retracker 3), Backscatter Error       There is a height and backscatter error for Retracker 2 and a height error<br>records  | CS_OFFL_SIR_LRM_220200423T175500_20200423T182606_D001  | (Retracker 3), Backscatter Error<br>(Retracker 2)   |   |
| CS_OFFL_SIR_LRM_2_20200423T185920_20200423T19556_D001 Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error for Retracker 2 and a height error for Retracker 2 and a height error for Retracker 2 and a height error for Retracker 3 for one or more records   | CS_OFFL_SIR_LRM_220200423T184606_20200423T185338_D001  | (Retracker 3), Backscatter Error  |   |
| CS_OFFL_SIR_LRM_2_20200423T185920_20200423T191556_D001 (Retracker 3), Backscatter Error for Retracker 2 and a neight error for Retracker 3 and a neight erro  | CS_OFFL_SIR_LRM_220200423T185819_20200423T185918_D001  | Error (Retracker 2)   |   |
|   | CS_OFFL_SIR_LRM_220200423T185920_20200423T191556_D001  | (Retracker 3), Backscatter Error  |   |

| CS_OFFL_SIR_LRM_220200423T193253_20200423T194639_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)                                | There is a height and backscatter error for Retracker 2 for one or more<br>records  |
|---|---|---|
| CS_OFFL_SIR_LRM_220200423T194916_20200423T200043_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2), Surface model<br>unavailable  | There is a height and backscatter error for Retracker 2 and no DEM or<br>Slope Model was used for the location of one or more records |
| CS_OFFL_SIR_LRM_220200423T202820_20200423T203744_D001 | Height Error (Retracker 2), Height Error<br>(Retracker 3), Backscatter Error<br>(Retracker 2) | There is a height and backscatter error for Retracker 2 and a height error<br>for Retracker 3 for one or more records                 |
| CS_OFFL_SIR_LRM_220200423T203746_20200423T203839_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)                                | There is a height and backscatter error for Retracker 2 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T204019_20200423T205447_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)                                | There is a height and backscatter error for Retracker 2 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T211434_20200423T212436_D001 | Height Error (Retracker 2), Height Error<br>(Retracker 3), Backscatter Error<br>(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_220200423T212716_20200423T213230_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)                                | There is a height and backscatter error for Retracker 2 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T213513_20200423T214208_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)                                | There is a height and backscatter error for Retracker 2 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T214509_20200423T214519_D001 | Height Error (Retracker 2), Height Error<br>(Retracker 3), Backscatter Error<br>(Retracker 2) | There is a height and backscatter error for Retracker 2 and a height error<br>for Retracker 3 for one or more records                 |
| CS_OFFL_SIR_LRM_220200423T221117_20200423T223415_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)                                | There is a height and backscatter error for Retracker 2 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T224740_20200423T231428_D001 | Height Error (Retracker 2), Backscatter<br>Error (Retracker 2)                                | There is a height and backscatter error for Retracker 2 for one or more records   |
| CS_OFFL_SIR_LRM_220200423T233728_20200423T233806_D001 | Height Error (Retracker 2), Height Error<br>(Retracker 3), Backscatter Error<br>(Retracker 2) | There is a height and backscatter error for Retracker 2 and a height error<br>for Retracker 3 for one or more records                 |
| CS_OFFL_SIR_LRM_220200423T234844_20200424T001346_D001 | Height Error (Retracker 2), Height Error<br>(Retracker 3), Backscatter Error<br>(Retracker 2) | There is a height and backscatter error for Retracker 2 and a height error<br>for Retracker 3 for one or more records                 |