

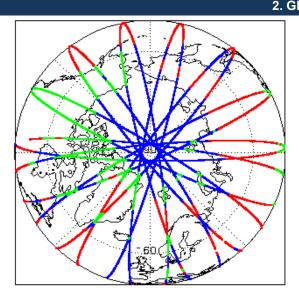
# **QA4EO Daily Report for OFFLINE data:**

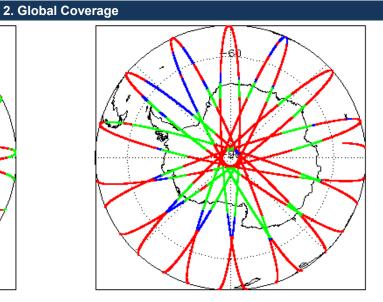
23/03/2020

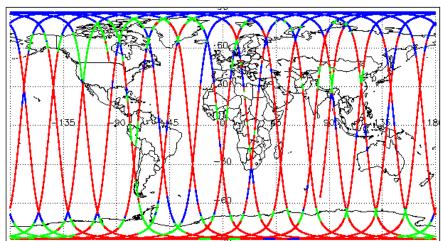
## 1. Overview

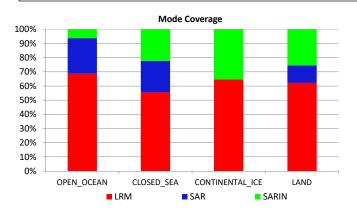
| Papart Production Data  | 23-Apr-2020             | Check                                      | Status                  |
|-------------------------|-------------------------|--|-------------------------|
| Report Production Date: |                         | Server check: science-pds.cryosat.esa.int  | 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                 |
|                         |                         | Product Header Analysis                    | Nominal                 |
|                         |                         | Star Tracker Usage Check                   | Nominal                 |
|                         |                         | L1B Tracking Flag Check                    | See Section 4.4         |
|                         |                         | L1B Calibration Usage Check                | See Section 4.5         |
|                         |                         | 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 |

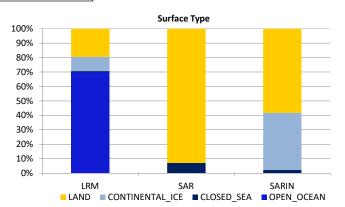
| Mission / Instrument News |                 |  |
|---------------------------|-----------------|--|
| 22-Mar-2020               | None            |  |
| 23-Mar-2020               | None            |  |
| 24-Mar-2020               | Nothing planned |  |











| LRM   | 66.9 |
|-------|------|
| SAR   | 19.8 |
| SARIn | 13.3 |

Mode Coverage (%)

### 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_20200323T000248_20200323T000340_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T001511_20200323T002204_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T002208_20200323T002223_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T002400_20200323T002458_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T002717_20200323T004746_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T015617_20200323T020554_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T020557_20200323T023227_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T023852_20200323T024221_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T034216_20200323T034323_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T034605_20200323T035437_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T035519_20200323T040246_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T041349_20200323T041915_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T051828_20200323T051848_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T051934_20200323T051945_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T052237_20200323T052831_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T055311_20200323T055813_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T060326_20200323T063718_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T063958_20200323T064002_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T064005_20200323T064029_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T064032_20200323T064039_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T064041_20200323T064100_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T064103_20200323T064112_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T074358_20200323T075615_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T075618_20200323T075942_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T075944_20200323T075948_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T075950_20200323T075958_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T080001_20200323T080140_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T080622_20200323T081435_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T081803_20200323T081807_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T081811_20200323T081818_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T081822_20200323T081826_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T081832_20200323T081914_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T081918_20200323T081943_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T081946_20200323T081948_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T081954_20200323T082000_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T082005_20200323T082024_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T082027_20200323T082033_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T082035_20200323T082049_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T085235_20200323T090709_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T092306_20200323T093543_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T093611_20200323T093844_D001 | Loss of echo | The tracking echo is missing for one or more records |

CS OFFL SIR LRM 1B 20200323T094045 20200323T094102 D001 CS OFFL SIR LRM 1B 20200323T094105 20200323T095007 D001 CS OFFL SIR LRM 1B 20200323T095151 20200323T095529 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T095531\_20200323T095531\_D001 CS OFFL SIR LRM 1B 20200323T095537 20200323T095548 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T095550\_20200323T095600\_D001 CS OFFL SIR LRM 1B 20200323T095602 20200323T095649 D001 CS OFFL SIR LRM 1B 20200323T095653 20200323T100033 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T100143 20200323T100145 D001 CS OFFL SIR LRM 1B 20200323T101720 20200323T101752 D001 CS OFFL SIR LRM 1B 20200323T101824 20200323T102756 D001 CS OFFL SIR LRM 1B 20200323T102800 20200323T102806 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T102808\_20200323T102809\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T102812\_20200323T102934\_D001 CS OFFL SIR LRM 1B 20200323T103446 20200323T104950 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T112627\_20200323T112718\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T113106\_20200323T113143\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T113232\_20200323T113301\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T113306\_20200323T113338\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T113342\_20200323T113926\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T115138\_20200323T115145\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T115434\_20200323T120021\_D001 CS OFFL SIR LRM 1B 20200323T120131 20200323T122840 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T123352\_20200323T123857\_D001 CS OFFL SIR LRM 1B 20200323T124138 20200323T130714 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T130920\_20200323T131724\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T133913\_20200323T140725\_D001 CS OFFL SIR LRM 1B 20200323T142048 20200323T144908 D001 CS OFFL SIR LRM 1B 20200323T144910 20200323T144943 D001 CS OFFL SIR LRM 1B 20200323T145038 20200323T145259 D001 CS OFFL SIR LRM 1B 20200323T145332 20200323T145538 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T160832\_20200323T161202\_D001 CS OFFL SIR LRM 1B 20200323T161325 20200323T161812 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T161830\_20200323T162330\_D001 CS OFFL SIR LRM 1B 20200323T162951 20200323T163048 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T163111\_20200323T163218\_D001 CS OFFL SIR LRM 1B 20200323T180142 20200323T180610 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T180720\_20200323T180804\_D001 CS\_OFEL\_SIR\_LRM\_1B\_20200323T182802\_20200323T182920\_D001 CS OFFL SIR LRM 1B 20200323T200633 20200323T200715 D001 CS OFFL SIR LRM 1B 20200323T200720 20200323T200736 D001 CS OFFL SIR LRM 1B 20200323T200741 20200323T200747 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T200749\_20200323T200750\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T200752\_20200323T200828\_D001 CS OFFL SIR LRM 1B 20200323T200832 20200323T200835 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T200838\_20200323T200840\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T200843\_20200323T200849\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T202546\_20200323T202640\_D001 CS OFFL SIR LRM 1B 20200323T202644 20200323T204331 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T210027\_20200323T211405\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T212943\_20200323T213015\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T214515\_20200323T214936\_D001 CS OFFL SIR LRM 1B 20200323T214939 20200323T215306 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T215546\_20200323T220605 D001 CS OFFL SIR LRM 1B 20200323T224245 20200323T225119 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T225509\_20200323T225957\_D001 CS OFFL SIR LRM 1B 20200323T230241 20200323T230827 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T232334\_20200323T232910\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T232912\_20200323T232949\_D001 CS OFFL SIR LRM 1B 20200323T232952 20200323T232959 D001 CS OFFL SIR LRM 1B 20200323T233002 20200323T233015 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T233020\_20200323T233040\_D001 CS OFFL SIR LRM 1B 20200323T233042 20200323T233125 D001 CS\_OFFL\_SIR\_LRM\_1B\_20200323T233128\_20200323T233135\_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

| CS_OFFL_SIR_LRM_1B_20200323T233138_20200323T233142_D001 | Loss of echo | The tracking echo is missing for one or more records |
|---|--------------|--|
| CS_OFFL_SIR_LRM_1B_20200323T233145_20200323T233150_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T233153_20200323T233201_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T233218_20200323T233307_D001 | Loss of echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_LRM_1B_20200323T233707_20200323T233738_D001 | Loss of echo | The tracking echo is missing for one or more records |

| 4.5.1.4.P. Calibratian Llagge Check   |  |   |  |
|---|--|---|--|
| 4.5 L1B Calibration Usage Check   |  |   |  |
| Each product is checked in order to ensure that the necessary calibration files h   | ave been used in processing.                 |   |  |
| Number of products with errors: 1   |  |   |  |
| Product   | Test Failed                                  | Description   |  |
| CS_OFFL_SIR_SIN_1B_20200323T223008_20200323T223011_D001   | Cal1 corr. missing                           | Cal1 Correction has not been applied  |  |
| 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 th     | he 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   | nt record. The bit value of this flag indica | ates 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 m   | easurement record. The bit value of this     | flag indicates any problems when set.   |  |
| Currently, there are several common error flags raised in the Level 1B pro-<br>below, followed by a table of any additional issues arising from this test.  | ducts which are expected due to oper         | rational mode or surface type. All common flags are summarised in the list                                |  |
| Block Degraded Flag: This flag is currently set for a number of individual record   | is generally at the start or end of produc   | ts (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 applic    | cation is deactivated, but this is in line with the current configuration.                                |  |
| Number of products with errors: 2   |  |   |  |
| Product   | Test Failed                                  | Description   |  |
| CS_OFFL_SIR_LRM_1B_20200323T142048_20200323T144908_D001   | Echo error, TRK echo error                   | The tracking echo has returned an error and the Rx1 Echo Error flag is set,<br>indicating a degraded echo |  |
| CS_OFFL_SIR_SIN_1B_20200323T223008_20200323T223011_D001   | Cal1 Correction missing,                     | Call Correction has not been applied  |  |
|   |  |   |  |
| 5.  | Level 2 Data Quality Ch                      | IECK  |  |
| 5.1 L2 Product Format Check   |  |   |  |
| Each product, retrieved and unpacked from the science server, is checked to er  | sure it consists of both an XML header t     | 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 inconsisten     | cies 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 th     | he 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 indicate  | es 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: 59  |  |   |  |
|   | Test Failed                                  | Description   |  |

| (Retracker 3) Backscatter Error | There is a height and backscatter error for Retracker 2 and a height error<br>for Retracker 3 for one or more records |
|---------------------------------|---|

No DEM or Slope Model was used for the location of one or more records

Surface Model Unavailable

CS\_OFFL\_SIR\_LRM\_2\_\_20200323T000248\_20200323T000340\_D001

| CS_OFFL_SIR_LRM_220200323T010545_20200323T013351_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_2_20200323T020557_20200323T023227_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_220200323T024529_20200323T032026_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_220200323T033329_20200323T033445_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_220200323T040536_20200323T040658_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_220200323T042419_20200323T044806_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_220200323T045006_20200323T045846_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_220200323T051205_20200323T051435_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_220200323T053120_20200323T055104_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_220200323T060326_20200323T063718_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_220200323T070256_20200323T072549_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_220200323T074358_20200323T075615_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_220200323T075618_20200323T075942_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_220200323T080001_20200323T080140_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_220200323T080622_20200323T081435_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_220200323T083411_20200323T085022_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_220200323T085235_20200323T090709_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_220200323T092306_20200323T093543_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_220200323T093611_20200323T093844_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_2_20200323T094045_20200323T094102_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_220200323T094105_20200323T095007_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_220200323T101435_20200323T101625_D001  | Surface Model Unavailable   | No DEM or Slope Model was used for the location of one or more records  |
| CS_0FFL_SIR_LRM_220200323T101824_20200323T102756_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_220200323T103446_20200323T104950_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_220200323T110229_20200323T111930_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_220200323T112203_20200323T112414_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_220200323T113106_20200323T113143_D001  | Surface Model Unavailable   | No DEM or Slope Model was used for the location of one or more records  |
| CS_0FFL_SIR_LRM_220200323T113342_20200323T113926_D001  | Surface Model Unavailable   | No DEM or Slope Model was used for the location of one or more records  |
| CS_OFFL_SIR_LRM_220200323T115138_20200323T115145_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_220200323T120131_20200323T122840_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_220200323T124138_20200323T130714_D001  | Reight 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_0FFL_SIR_LRM_220200323T133913_20200323T140725_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_220200323T142048_20200323T144908_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_220200323T145717_20200323T145906_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_220200323T151219_20200323T154659_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_220200323T155916_20200323T160542_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_220200323T163602_20200323T163922_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_220200323T165159_20200323T170026_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_220200323T170311_20200323T172617_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_220200323T173816_20200323T175233_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_220200323T175333_20200323T175816_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_220200323T183046_20200323T190413_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_220200323T192225_20200323T195346_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_220200323T201350_20200323T202105_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_220200323T202546_20200323T202640_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_220200323T202644_20200323T204331_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_220200323T210027_20200323T211405_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_220200323T211731_20200323T212755_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_220200323T212943_20200323T213015_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_220200323T214939_20200323T215306_D001 | Surface Model Unavailable   | No DEM or Slope Model was used for the location of one or more records  |
| CS_OFFL_SIR_LRM_220200323T215546_20200323T220605_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_220200323T220745_20200323T222238_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_220200323T224245_20200323T225119_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_220200323T225509_20200323T225957_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_220200323T233002_20200323T233015_D001 | Surface Model Unavailable   | No DEM or Slope Model was used for the location of one or more records  |
| CS_OFFL_SIR_LRM_220200323T233844_20200324T000149_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_SIN_220200323T223008_20200323T223011_D001 | Calibration Warning   | The Calibration correction is missing or has been taken from the IPFDB instead of the Calibration products for one or more records    |