

<u>06/03/2013</u>

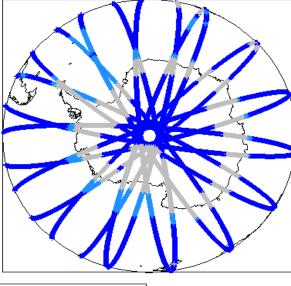


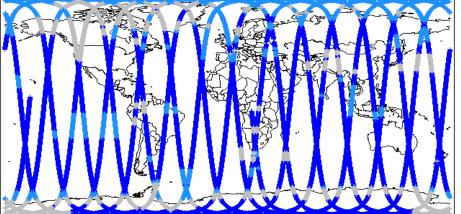
| | | Check | Status |
|-------------------------|----------------------------|---|-------------------------|
| | | Server check: science-pds.cryosat.esa.int | Nominal |
| | | Server check: calval-pds.cryosat.esa.int | Nominal |
| | | Product Software Check | Nominal |
| Report Production Date: | 09-Apr-2013 | Product Format Check | Nominal |
| | | Product Header Analysis | Nominal |
| Data Used: | OFFLINE L1B and L2 Science | Auxiliary Data File Usage | Nominal |
| | Data | Auxiliary Correction Check | See Section 4.4 and 5.4 |
| | <u> </u> | Measurement Data Set Check | See Section 4.5 and 5.5 |

1. Overview

| Mission / Instrun | nent News |
|-------------------|--|
| 05-Mar-2013 | None |
| 06-Mar-2013 | None |
| 07-Mar-2013 | SIRAL unavailability from 07-March-2013 07:51:38 to 09:36:52 due to a planned orbit manoeuvre. |

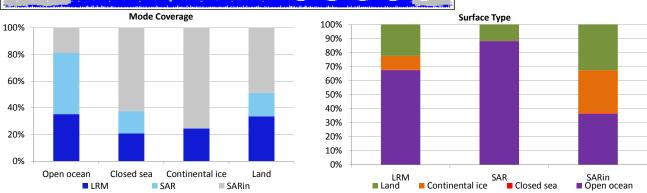
2. Global Coverage Global Coverage (north pole view) Global Coverage (south pole view)





Global Coverage

| Mode Coverage(%) | | |
|------------------|-----|-------|
| | LRM | 69.63 |
| | SAR | 17.60 |
| | SIN | 12.58 |



| | | 3. Instrument Co | nfiguration | | |
|---|--|--|---|---|--------------|
| The SIRAL instrument configuration | for the day of acquisition is provided | l below. | | | |
| SIRAL instrument(s) in use: | SIRAL - A | | | | |
| Star Tracker(s) in use: | Star Tracker 1 & 2 | | | | |
| | 4 | . Level 1B Data Q | ualitv Check | | |
| 4.1 L1 Product Format C | | | | | |
| Each product, retrieved and unpacket | | ed to ensure it consists of both | an XML header file (. | HDR) and a product file (.DBL). | |
| Number of products with errors: | 0 | | | | |
| 4.2 L1B Product Header | Analysis | | | | |
| For all products, a series of pre-defin | and checks are carried out on the M | 2H and SPH in order to identify | any inconsistencies | and/or errors raised by the ground-segment proces | ssing chain |
| Number of products with errors: | 0 | | | | |
| | | | | | |
| 4.3 L1B Auxilary Data Fi | ie usaye ulleck | | | | |
| Each product is checked for missing | | rmined baseline and also to ch | eck the validity of Au | iliary Data Files is correct. | |
| Number of products with errors: | 0 | | | | |
| 4.4 L1B Flagged Auxiliar | ry Correction Error Chec | k | | | |
| Each product is checked to spot aux | iliary corrections flagged by the grou | ind-station processing chain as | missing or containing | g errors | |
| Number of products with errors: | 4 | | | | |
| Product CS_OFFL_SIR_LRM_1B_20130305 | T224524 20120206T002027 D004 | Test Failed | mosphere correction e | arror - | |
| CS_OFFL_SIR_LRM_1B_20130306 | | | mosphere correction e | | |
| CS_OFFL_SIR_LRM_1B_20130306 CS_OFFL_SIR_SAR_1B_20130306 | | | mosphere correction e mosphere correction e | | |
| 4.5 L1B Measurement Co | onfidence Data Check | | | | |
| | | 4) for each measurement recor | d. The bit value of thi | s flag indicates any problems when set. | |
| CryoSat L1B data includes a measu Number of products with errors: Product | rement confidence flag word (field 1 2 | Test Failed | | s flag indicates any problems when set. Description | |
| CryoSat L1B data includes a measu Number of products with errors: | rement confidence flag word (field 1 2 5T035555_20130306T040819_B001 | Test Failed Attitude cor | | s flag indicates any problems when set. | _ |
| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 | rement confidence flag word (field 1 2 \$1035555_20130306T040819_B001 \$1040820_20130306T040944_B001 | Test Failed Attitude cor | rection missing rection missing | s flag indicates any problems when set. Description The attitude has not been corrected | |
| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 | rement confidence flag word (field 1 2 3T035555_20130306T040819_B001 3T040820_20130306T040944_B001 | Test Failed Attitude cor Attitude cor | rection missing rection missing | s flag indicates any problems when set. Description The attitude has not been corrected | |
| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 CS_OFFL_SIR_SAR_1B_20130306 5.1 L2 Product Format C | rement confidence flag word (field 1 2 \$T035555_20130306T040819_8001 \$T040820_20130306T040944_8001 | Test Failed Attitude cor Attitude cor 5. Level 2 Data Qu | rection missing rection missing Iality Check | s flag indicates any problems when set. Description The attitude has not been corrected | |
| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 CS_OFFL_SIR_SAR_1B_20130306 5.1 L2 Product Format C | rement confidence flag word (field 1 2 \$T035555_20130306T040819_8001 \$T040820_20130306T040944_8001 | Test Failed Attitude cor Attitude cor 5. Level 2 Data Qu | rection missing rection missing Iality Check | s flag indicates any problems when set. | |
| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 CS_OFFL_SIR_SAR_1B_20130306 5.1 L2 Product Format C Each product, retrieved and unpacke | rement confidence flag word (field 1 2 5T035555_20130306T040819_B001 5T040820_20130306T040944_B001 Check ed from the science server, is check | Test Failed Attitude cor Attitude cor 5. Level 2 Data Qu | rection missing rection missing Iality Check | s flag indicates any problems when set. | |
| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 CS_OFFL_SIR_SAR_1B_20130306 5.1 L2 Product Format C Each product, retrieved and unpacke Number of products with errors: 5.2 L2 Product Header A | rement confidence flag word (field 1 2 3T035555_20130306T040819_B001 3T040820_20130306T040944_B001 Check ed from the science server, is check 0 .nalysis | Test Failed Attitude cor Attitude cor 5. Level 2 Data Qu ed to ensure it consists of both | rection missing rection missing Iality Check an XML header file (. | s flag indicates any problems when set. | ssing chain |
| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 CS_OFFL_SIR_SAR_1B_20130306 5.1 L2 Product Format C Each product, retrieved and unpacke Number of products with errors: 5.2 L2 Product Header A | rement confidence flag word (field 1 2 3T035555_20130306T040819_B001 3T040820_20130306T040944_B001 Check ed from the science server, is check 0 .nalysis | Test Failed Attitude cor Attitude cor 5. Level 2 Data Qu ed to ensure it consists of both | rection missing rection missing Iality Check an XML header file (. | s flag indicates any problems when set. | ssing chain |
| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 CS_OFFL_SIR_SAR_1B_20130306 5.1 L2 Product Format C Each product, retrieved and unpacke Number of products with errors: 5.2 L2 Product Header A For all products, a series of pre-defin | rement confidence flag word (field 1 2 3T035555_20130306T040819_B001 3T040820_20130306T040944_B001 3Theck ed from the science server, is check 0 analysis ned checks are carried out on the M | Test Failed Attitude cor Attitude cor 5. Level 2 Data Qu ed to ensure it consists of both | rection missing rection missing Iality Check an XML header file (. | s flag indicates any problems when set. | ssing chain |
| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 CS_OFFL_SIR_SAR_1B_20130306 5.1 L2 Product Format C Each product, retrieved and unpacke Number of products with errors: 5.2 L2 Product Header A For all products, a series of pre-defin Number of products with errors: | rement confidence flag word (field 1 2 3T035555_20130306T040819_B001 3T040820_20130306T040944_B001 3 Theck ed from the science server, is check 0 analysis hed checks are carried out on the M 0 a Usage Check | Test Failed Attitude cor Attitude cor 5. Level 2 Data Qu ed to ensure it consists of both PH and SPH in order to identify | rection missing rection missing Iality Check an XML header file (. | s flag indicates any problems when set. | ssing chain |
| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 CS_OFFL_SIR_SAR_1B_20130306 5.1 L2 Product Format C Each product, retrieved and unpacke Number of products with errors: 5.2 L2 Product Header A For all products, a series of pre-defin Number of products with errors: 5.3 L2 Auxiliary Data File | rement confidence flag word (field 1 2 3T035555_20130306T040819_B001 3T040820_20130306T040944_B001 3 Theck ed from the science server, is check 0 analysis hed checks are carried out on the M 0 a Usage Check | Test Failed Attitude cor Attitude cor 5. Level 2 Data Qu ed to ensure it consists of both PH and SPH in order to identify | rection missing rection missing Iality Check an XML header file (. | s flag indicates any problems when set. | ssing chain |
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| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 CS_OFFL_SIR_SAR_1B_20130306 5.1 L2 Product Format C Each product, retrieved and unpacke Number of products with errors: 5.2 L2 Product Header A For all products, a series of pre-defir Number of products with errors: 5.3 L2 Auxiliary Data File Each product is checked for missing Number of products with errors: 5.4 L2 Flagged Auxiliary Each product is checked to spot aux Number of products with errors: 5.4 L2 Flagged Auxiliary Each product schecked to spot aux Number of products with errors: Product CS_OFFL_SIR_LRM_2_20130306 | rement confidence flag word (field 1 2 3T035555_20130306T040819_B001 3T040820_20130306T040944_B001 3T040820_20130306T040944_B001 3T040820_20130306T040944_B001 3T040820_20130306T040944_B001 3T234534_20130306T060244_B001 3T234534_20130306T060244_B001 | Test Failed Attitude cor Attitude cor Attitude cor 5. Level 2 Data Que ed to ensure it consists of both PH and SPH in order to identify rmined baseline and also to ch und-station processing chain as Test Failed Dynamic att | rection missing rection missing Iality Check an XML header file (. r any inconsistencies eck the validity of Aux s missing or containing | s flag indicates any problems when set. | ssing chain |
| CryoSat L1B data includes a measu Number of products with errors: Product CS_OFFL_SIR_LRM_1B_20130306 CS_OFFL_SIR_SAR_1B_20130306 5.1 L2 Product Format C Each product, retrieved and unpacke Number of products with errors: 5.2 L2 Product Header A For all products, a series of pre-defin Number of products with errors: 5.3 L2 Auxiliary Data File Each product is checked for missing Number of products with errors: 5.4 L2 Flagged Auxiliary Each product is checked to spot aux Number of products with errors: 5.4 L2 Flagged Auxiliary Each product is checked to spot aux Number of products with errors: Product CS_OFFL_SIR_LRM_220130305 | rement confidence flag word (field 1 2 3T035555_20130306T040819_B001 3T040820_20130306T040944_B001 3T040820_20130306T040944_B001 3T040820_20130306T040944_B001 3Theck ad from the science server, is check 0 analysis hed checks are carried out on the M 0 a Usage Check Data Set Descriptors wrt a pre-dete 0 Correction Error Check illiary corrections flagged by the grou 4 T234534_20130306T002027_B001 T1055007_20130306T02027_B001 | Test Failed Attitude cor Attitude cor Attitude cor 5. Level 2 Data Que ed to ensure it consists of both PH and SPH in order to identify rmined baseline and also to ch und-station processing chain as Test Failed Dynamic att Dynamic att Dynamic att | rection missing rection missing Iality Check an XML header file (. an y inconsistencies eck the validity of Au eck the validity of Au mosphere correction of | s flag indicates any problems when set. | ssing chain |

5.5 L2 Measurement Quality Flag Check

CryoSat L2 data includes a quality flag word (field 43) for each 20-Hz measurement record. The bit value of this flag is an assessment of the measurement quality by the ground-segment processing chains

Presently, there are several common data Quality Flag errors raised by the Level 2 products which are either expected due to changes made to the IPF processor in Baseline B or else are due to known issues with the data processors. The investigation of the known issues are on-going and are due to be resolved with the next update of the Level 2 processors. All common known issues are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.

Freeboard Error: This Quality Flag is correctly set in all products as this parameter is currently not provided in the L2 products and the Freeboard value is presently set to the default value of -9999

SARin x-track angle error: Currently there is an on-going investigation into the high number of errors from the 'SARIn x-track Error' Quality Flag over Antarctica.

Height error and Backscatter error: It has been noted that the number of errors arising from the 'Backscatter Error' and 'Height Error' Quality Flag is much higher than expected over land areas and this is currently part of an on-going investigation by expert teams.

Number of products with errors:

| Product | Test Failed | Description | |
|---|-----------------|---|--|
| CS_OFFL_SIR_SAR_2A_20130306T192155_20130306T192913_B001 | Peakiness error | There is an error in the peakiness derivation | |
| | | | |
| | | | |

6. QCC Check

The QCC is a CryoSat facility that performs a primary survey of data products immediately after production by the PDS and LTA processing facilities. A list of the tests which raised errors or warnings is provided below.

Nb. There is currently a discrepancy between the number of QCC reports and the number of products reported. This is a known issue and investigation is on-going.

| Product type | Nb. Products | Nb. QCC Reports | Nb. Valid | Nb. Warnings | Nb. Errors |
|--------------|--------------|-----------------|-----------|--------------|------------|
| SIR_GDR_2A | 20 | 18 | 0 | 18 | 0 |
| SIR_LRM_1B | 131 | 131 | 131 | 0 | 0 |
| SIR_LRM_2 | 130 | 129 | 0 | 129 | 0 |
| SIR_SAR_1B | 154 | 158 | 0 | 158 | 0 |
| SIR_SAR_2A | 111 | 111 | 3 | 108 | 0 |
| SIR_SIN_1B | 97 | 100 | 0 | 100 | 0 |
| SIR_SIN_2 | 94 | 94 | 0 | 94 | 0 |

6.1 QCC Errors

Number of products with QCC errors:

6.2 Missing QCC Reports

Number of products with missing QCC reports:

Product name

CS_OFFL_SIR_GDR_2A_20130305T231203_20130306T005116_B001 CS_OFFL_SIR_LRM_1B_20130305T234534_20130306T002027_B001

0

3

CS_OFFL_SIR_LRM_2__20130305T234534_20130306T002027_B001