

1. Overview

Report Production Date:	Data Used:	OFFLINE L1B and L2 Science Data	Geophysical Ocean Products (GOP) L1B and L2 Science Data
01-Jul-2015	Check	Status	Status
	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
	Product Software Check	Nominal	Nominal
	Product Format Check	Nominal	Nominal
	Product Header Analysis	Nominal	Nominal
	Auxiliary Data File Usage Check	Nominal	Nominal
	Auxiliary Correction Data Check	Nominal	Nominal
	Measurement Confidence Data Check	See Section 5.5	See Section 7.6, 8.5 and 8.6

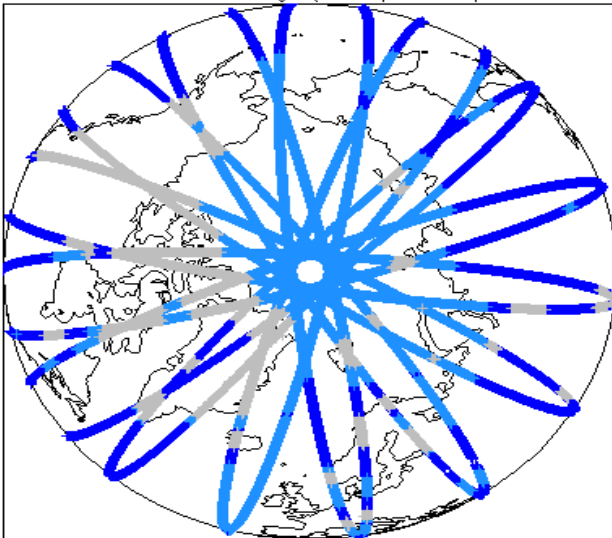
Mission / Instrument News	
23-May-2015	None
24-May-2015	None
25-May-2015	SIRAL unavailability on 25-May-2015 from 06:17:21 to 08:03:29 due to a planned orbit manoeuvre.

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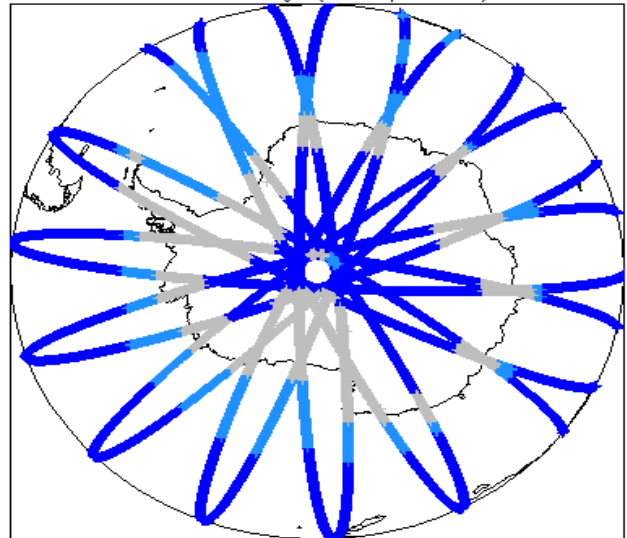
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2. Global Coverage

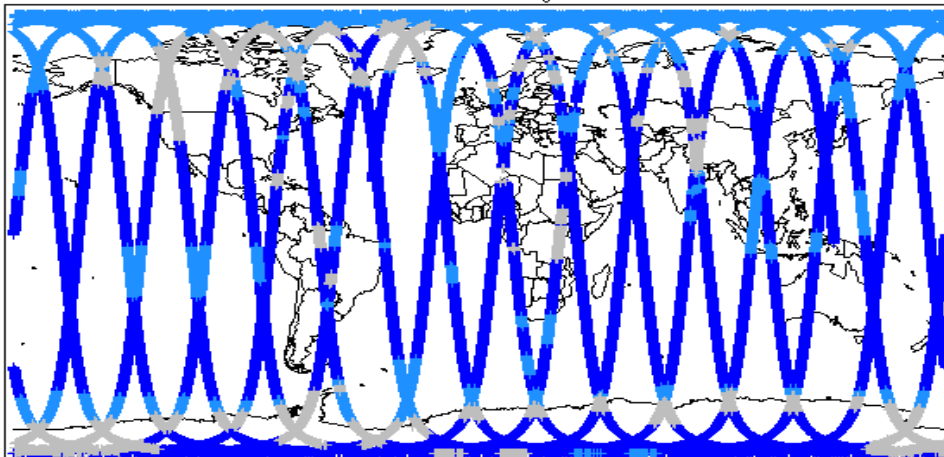
Global Coverage (north pole view)



Global Coverage (south pole view)

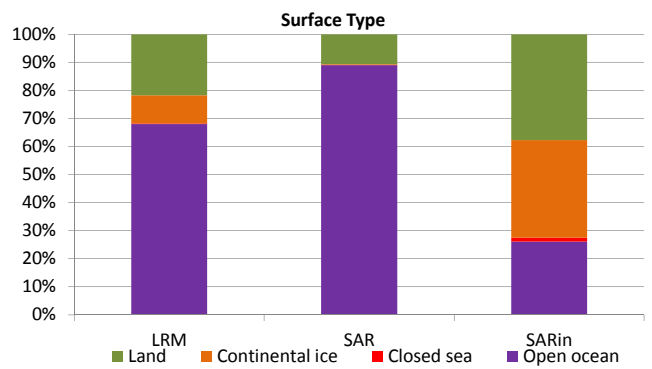
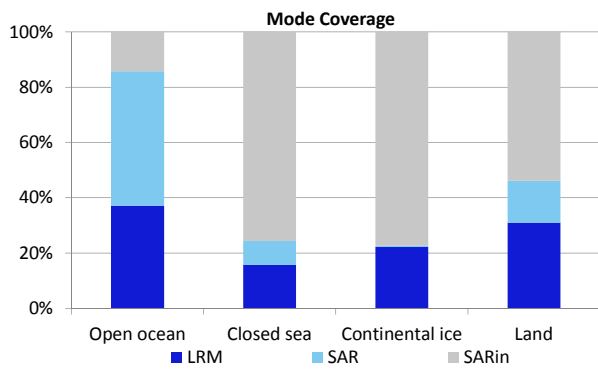


Global Coverage



Mode Coverage (%)

	LRM	66.38
	SAR	21.48
	SIN	11.94



3. Instrument Configuration

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

SIRAL instrument(s) in use:	SIRAL - A
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4. OFFLINE Level 1B Data Quality Check

4.1 L1B Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a product file (.DBL).

Number of products with errors: 0

4.2 L1B Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain.

Number of products with errors: 0

4.3 L1B Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

Number of products with errors: 0

4.4 L1B Auxiliary Correction Error Check

Each product is checked for auxiliary corrections flagged by the ground-station processing chain as missing or containing errors.

Number of products with errors: 0

4.5 L1B Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag word (field 18) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 0

5. OFFLINE Level 2 Data Quality Check

5.1 L2 Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a product file (.DBL).

Number of products with errors: 0

5.2 L2 Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain.

Number of products with errors: 0

5.3 L2 Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

Number of products with errors: 0

5.4 L2 Auxiliary Correction Error Check

Each product is checked for auxiliary corrections flagged by the ground-station processing chain as missing or containing errors.

Number of products with errors: 0

5.5 L2 Measurement Quality Flag Check

CryoSat L2 data includes a quality flag word (field 50) for each 20-Hz measurement record. The bit value of this flag is an assessment of the measurement quality by the processing chain.

There are several common Quality Flag errors raised in the L2 products which are either expected due to operational mode or surface type, or are under investigation. These known issues are summarised 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.

SARin x-track angle error: This flag is set when the difference between the computed surface elevation and the DEM is >50m. The DEM is only available over Greenland and Antarctica and therefore this flag is set for L2 SIN products in all other locations.

Height error and Backscatter errors: The height error and backscatter error flags are set for a number of products over land areas, but this is to be expected.

SSHA interpolation error: This flag is currently set for a number of products in all modes. This issue is under investigation.

Number of products with errors: 44

Product	Test Failed	Description
CS_OFFL_SIR_SAR_2_20150524T002613_20150524T003249_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T005515_20150524T005728_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T020810_20150524T021221_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T021431_20150524T021534_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T021804_20150524T021846_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T025344_20150524T025505_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T034355_20150524T035134_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T052213_20150524T052356_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T052405_20150524T053204_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T061144_20150524T061418_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T070540_20150524T071329_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T071430_20150524T071514_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T075027_20150524T075403_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T084346_20150524T085637_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T092935_20150524T093130_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T102508_20150524T103228_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T103351_20150524T103623_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T112058_20150524T112718_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T120406_20150524T120943_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T121513_20150524T121604_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T123038_20150524T123241_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T125938_20150524T130304_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T133603_20150524T133727_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T134021_20150524T134105_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T134317_20150524T135008_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T140350_20150524T141205_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T151448_20150524T151635_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T152140_20150524T152653_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T165927_20150524T170956_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T183548_20150524T183632_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T183739_20150524T184509_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T184534_20150524T184739_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T192459_20150524T192635_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T193644_20150524T193944_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T201313_20150524T202435_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T202529_20150524T202621_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T203044_20150524T203201_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T203413_20150524T203437_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T203459_20150524T203642_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T211534_20150524T211830_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T215231_20150524T215359_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T215457_20150524T220624_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T223953_20150524T224652_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150524T233639_20150524T234212_C001	Peakiness error	There is an error in the peakiness derivation

6. OFFLINE 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	16	0	0	0	0
SIR_LRM_1B	140	0	0	0	0
SIR_LRM_2	140	0	0	0	0
SIR_SAR_1B	115	0	0	0	0
SIR_SAR_2A	115	0	0	0	0
SIR_SIN_1B	95	0	0	0	0
SIR_SIN_2	95	0	0	0	0

6.1 QCC Errors

Number of products with QCC errors: 0

6.2 Missing QCC Reports

Number of products with missing QCC reports: All

7. GOP Level 1B Data Quality Check

7.1 L1B Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a product file (.DBL).

Number of products with errors: 0

7.2 L1B Product Header Analysis

For all products, a series of pre-defined checks are performed 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

7.3 L1B Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

Number of products with errors: 0

7.4 L1B Auxiliary Correction Error Check

Each product is checked for auxiliary corrections flagged by the ground-station processing chain as missing or containing errors.

Number of products with errors: 0

7.5 L1B Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag (field 12) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 0

7.6 L1B Waveform Group Data Check

CryoSat L1B data includes a waveform data flag (field 65) 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 a large number of products over land, indicating that the tracking echo is missing.

Number of products with errors: 40

8. GOP Level 2 Data Quality Check

8.1 L2 Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a product file (.DBL).

Number of products with errors: 0

8.2 L2 Product Header Analysis

For all products, a series of pre-defined checks are performed 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

8.3 L2 Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

Number of products with errors: 0

8.4 L2 Measurement Confidence Data Check

CryoSat L2 data includes a quality flag (field 14) for each 20-Hz measurement record. The bit value of this flag is an assessment of the measurement quality by the processing chains.

Number of products with errors: 0

8.5 L2 Range Measurement Check

Each product is checked to detect range measurements flagged by the processing chain as missing or containing errors.

Ocean Range Averaging Status Flag: This flag is currently set for products over land and sea ice, but this is to be expected.

Ice Range Averaging Status Flag: This flag is currently set for some products over land and continental ice.

Number of products with errors: 224

8.6 L2 SWH and Backscatter Measurement Check

Each product is checked to detect parameters related to SWH and sigma0 that are flagged by the processing chain as missing or containing errors.

SWH Averaging Status Flag: This flag is currently set for products over land and sea ice, but this is to be expected.

Ocean Backscatter Averaging Status Flag: This flag is currently set for products over land and sea ice, but this is to be expected.

Ice Backscatter Averaging Status Flag: This flag is currently set for some products over land and continental ice.

Number of products with errors: 204