

1. Overview

Report Production Date:	Data Used:	OFFLINE L1B and L2 Science Data	Geophysical Ocean Products (GOP) L1B and L2 Science Data
20-Apr-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

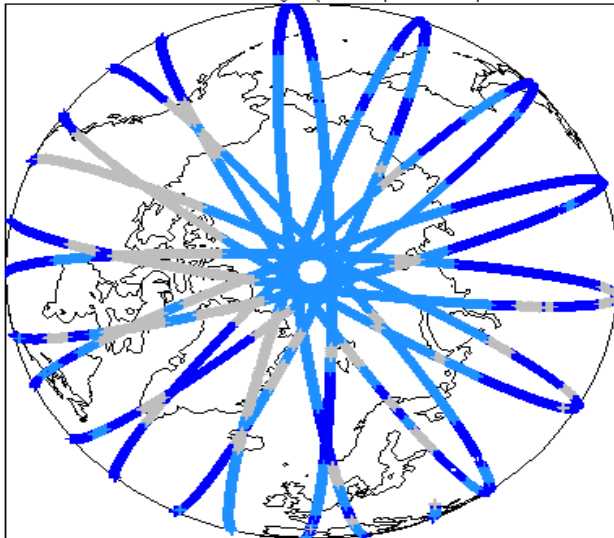
25-Feb-2015	Data generated with new Baseline-C IPFs but old GDR-D orbit files.
26-Feb-2015	Data generated with new Baseline-C IPFs but old GDR-D orbit files.
27-Feb-2015	Data generated with new Baseline-C IPFs but old GDR-D orbit files.

Report Contents

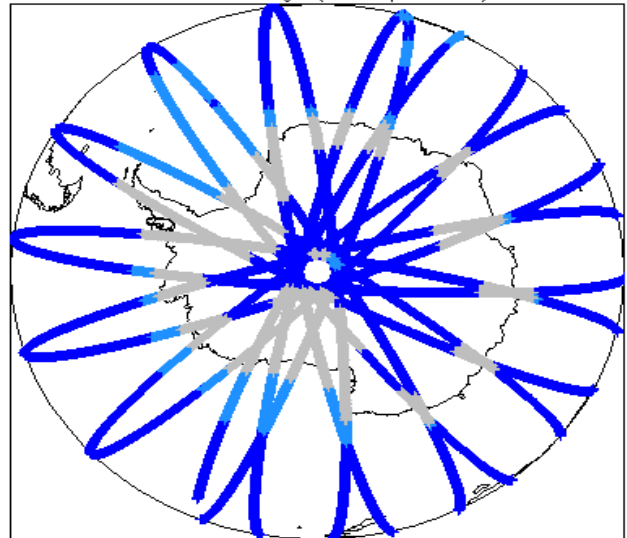
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2. Global Coverage

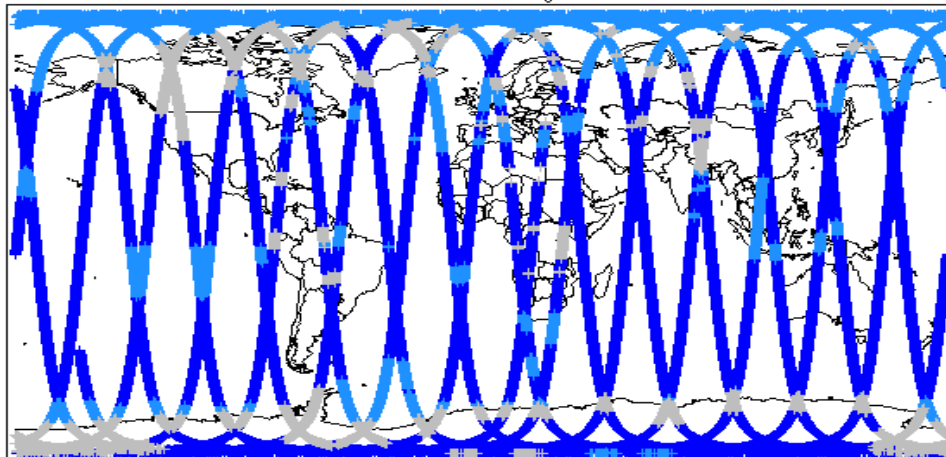
Global Coverage (north pole view)



Global Coverage (south pole view)

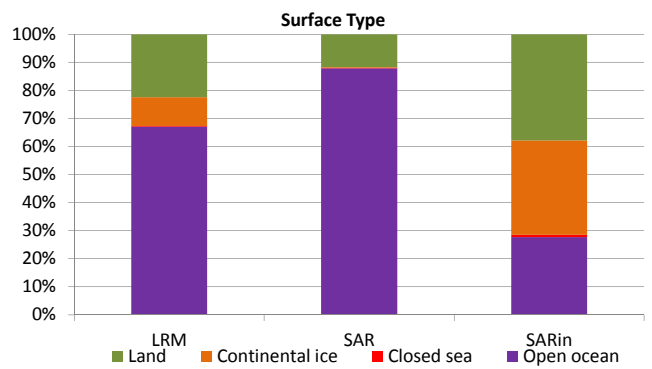
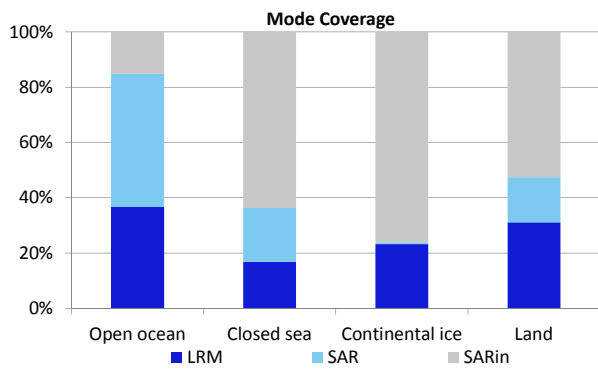


Global Coverage



Mode Coverage (%)

	LRM	68.72
	SAR	19.11
	SIN	11.96



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: 29

Product	Test Failed	Description
CS_OFFL_SIR_SAR_2__20150226T000159_20150226T000358_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T012149_20150226T013029_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T025551_20150226T025854_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T030300_20150226T030907_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T030943_20150226T031021_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T031127_20150226T031310_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T034909_20150226T035238_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T044101_20150226T044742_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T051010_20150226T051223_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T062305_20150226T062713_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T062924_20150226T063031_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T063301_20150226T063345_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T063943_20150226T063947_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T075850_20150226T080626_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T094122_20150226T094655_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T112033_20150226T112824_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T125727_20150226T131133_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T144001_20150226T144752_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T144849_20150226T145145_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T161856_20150226T162437_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T162942_20150226T163100_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T171430_20150226T171920_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T173353_20150226T173425_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T175810_20150226T180501_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T181845_20150226T182733_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T193633_20150226T194149_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T211428_20150226T212448_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T225230_20150226T230002_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150226T230028_20150226T230528_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	169	0	0	0	0
SIR_LRM_2	168	0	0	0	0
SIR_SAR_1B	118	0	0	0	0
SIR_SAR_2A	118	0	0	0	0
SIR_SIN_1B	102	0	0	0	0
SIR_SIN_2	102	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: 58

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: 244

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: 211