

1. Overview

Report Production Date:	Data Used:	OFFLINE L1B and L2 Science Data	Geophysical Ocean Products (GOP) L1B and L2 Science Data
17-Jun-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 4.5 and 5.5	See Section 7.5, 7.6, 8.5 and 8.6

Mission / Instrument News

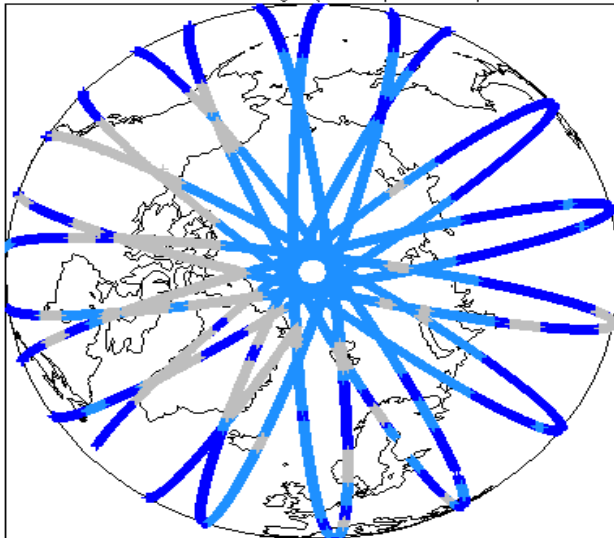
06-May-2015	SIRAL unavailability on 6-May-2015 from 03:11:00 to 08:12:32; and from 15:44:00 to 18:55:15 due to planned instrument roll manoeuvres.
07-May-2015	IPF1 vM1.0.2 and IPF2 vM1.0.3 installation and version change at 00:00h.
08-May-2015	Nothing planned

Report Contents

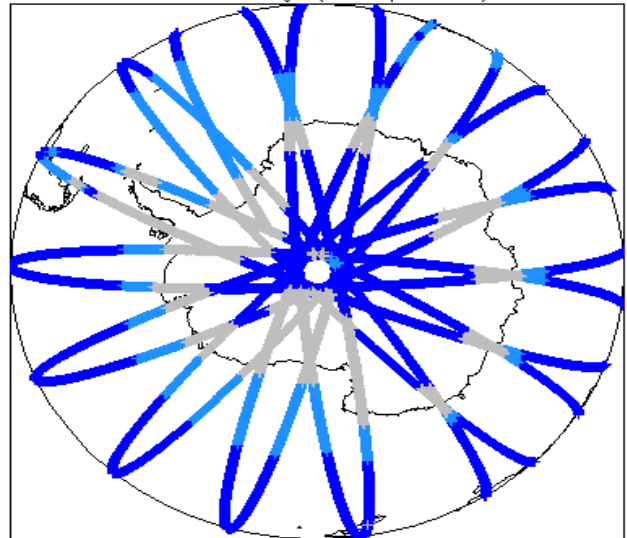
2	Global Coverage	OFFLINE Science Data	4	Level 1B Data Quality Check	GOP Science Data	7	Level 1B Data Quality Check
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		4.3	L1B Auxiliary Data File Usage Check	7.3	L1B Auxiliary Data File Usage Check		
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		6.1	QCC Errors				
		6.2	Missing QCC Reports				

2. Global Coverage

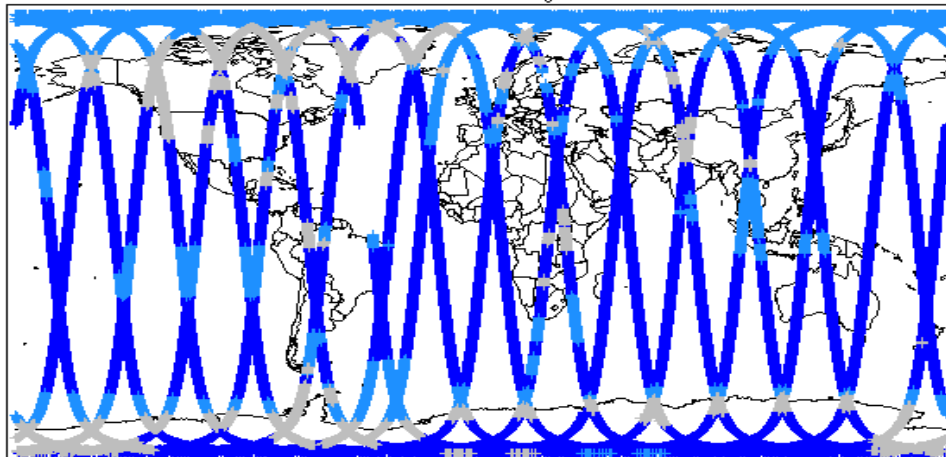
Global Coverage (north pole view)



Global Coverage (south pole view)

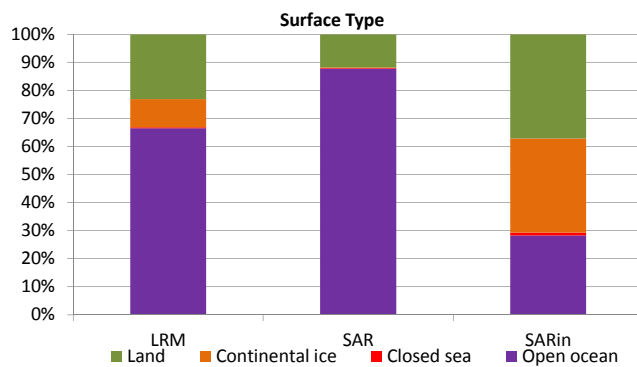
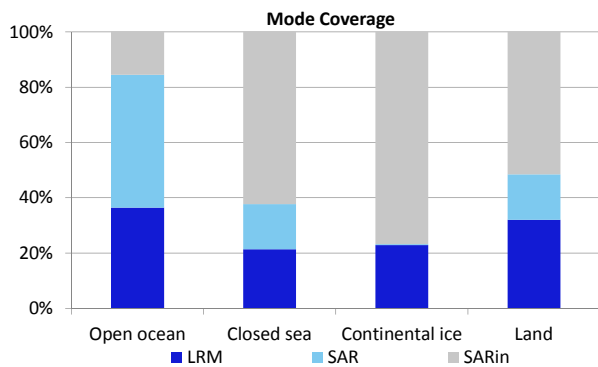


Global Coverage



Mode Coverage (%)

	LRM	64.96
	SAR	22.98
	SIN	11.87



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: 1

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20150507T182028_20150507T185635_C001	Echo error	The tracking echo has returned an error

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: 47

Product	Test Failed	Description
CS_OFFL_SIR_SAR_2_20150507T000825_20150507T000909_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T004120_20150507T004800_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T013642_20150507T014313_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T020536_20150507T020722_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T025554_20150507T030215_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T031631_20150507T032237_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T032456_20150507T032540_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T032720_20150507T032732_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T032810_20150507T033030_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T033153_20150507T033202_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T033742_20150507T033903_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T043849_20150507T043947_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T045639_20150507T045736_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T045758_20150507T050207_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T054254_20150507T054455_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T055624_20150507T055737_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T062703_20150507T062737_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T063220_20150507T064249_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T072151_20150507T072440_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T081144_20150507T081213_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T081557_20150507T082343_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T090057_20150507T090418_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T095253_20150507T095517_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T095554_20150507T100639_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T105305_20150507T105531_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T113023_20150507T113100_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T113529_20150507T114300_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T114449_20150507T114607_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T123053_20150507T123742_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T125009_20150507T125129_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T131438_20150507T131959_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T145333_20150507T150034_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T151410_20150507T152219_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T161758_20150507T162033_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T163154_20150507T163700_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T163739_20150507T164002_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T171622_20150507T171742_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T180847_20150507T181736_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T181756_20150507T182027_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T194809_20150507T195748_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T203515_20150507T203651_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T204654_20150507T205007_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T212315_20150507T213459_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T214113_20150507T214252_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T230143_20150507T230421_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T230549_20150507T231700_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150507T235016_20150507T235714_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	17	0	0	0	0
SIR_LRM_1B	136	0	0	0	0
SIR_LRM_2	136	0	0	0	0
SIR_SAR_1B	115	0	0	0	0
SIR_SAR_2A	115	0	0	0	0
SIR_SIN_1B	93	0	0	0	0
SIR_SIN_2	93	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: 1

Product	Test Failed	Description
CS_OFFL_SIR_GOP_1B_20150507T182028_20150507T185635_B001	Power scaling error	There has been an error in the scaling of the L1B waveform

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: 42

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: 216

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: 194