

1. Overview

Report Production Date:	Data Used:	OFFLINE L1B and L2 Science Data	Geophysical Ocean Products (GOP) L1B and L2 Science Data
22-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	See Section 5.3	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

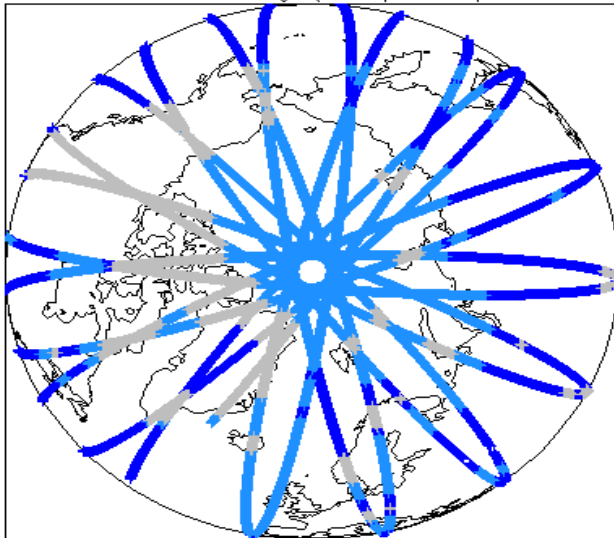
Mission / Instrument News	
13-May-2015	None
14-May-2015	None
15-May-2015	Nothing planned

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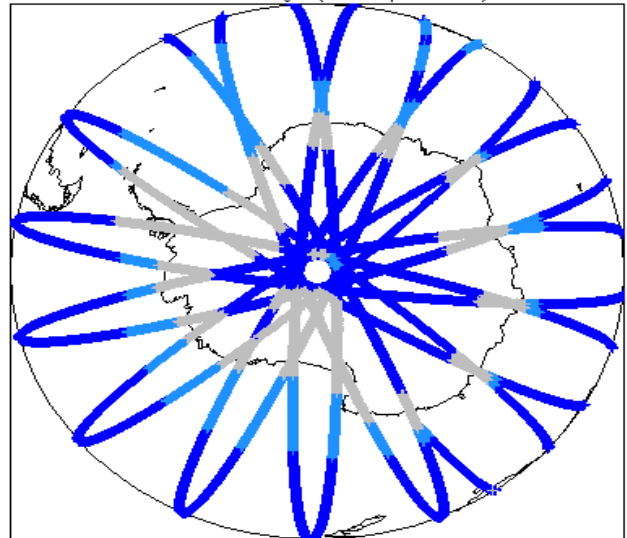
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2. Global Coverage

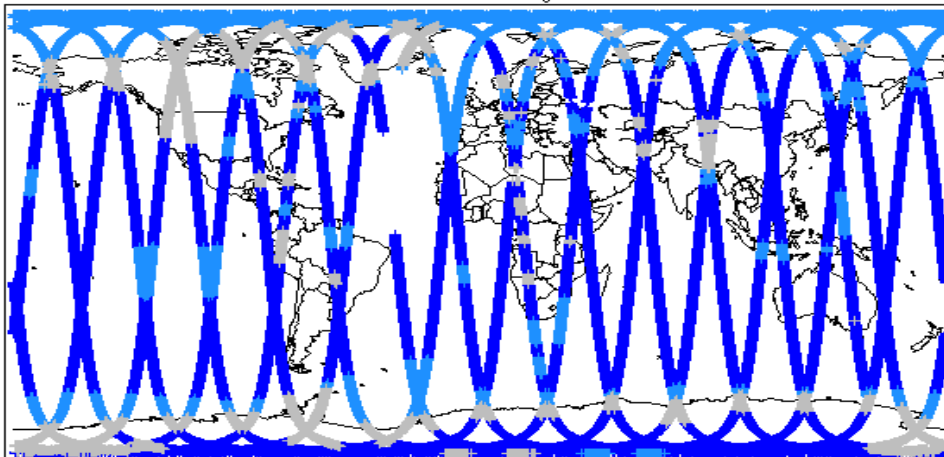
Global Coverage (north pole view)



Global Coverage (south pole view)

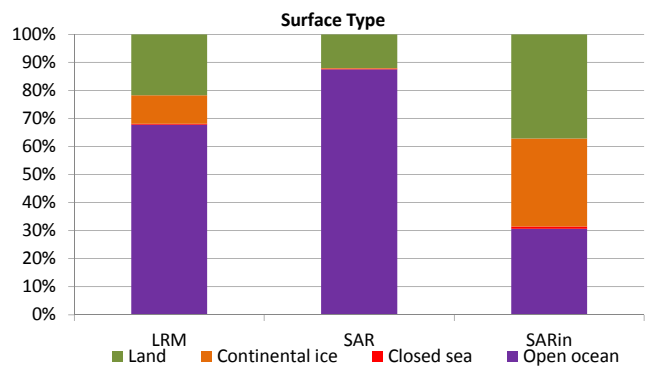
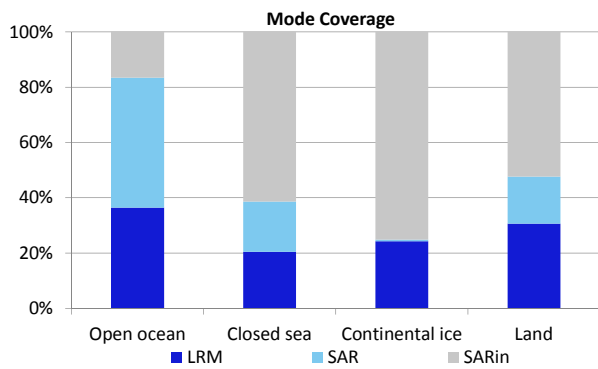


Global Coverage



Mode Coverage (%)

	LRM	66.33
	SAR	21.24
	SIN	12.23



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: 2

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20150514T084824_20150514T084941_C001	Echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20150514T204421_20150514T204539_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: 1

Product	AUX File	Comment
CS_OFFL_SIR_GDR_2_20150514T232801_20150515T010715_C001	CS_OPER_AUX_ORBDOR_20150513T215525_20150515T002325_0001	Coverage missing for intervals [2015-05-15T00:23:25, 2015-05-15T01:07:15]

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: 50

Product	Test Failed	Description
CS_OFFL_SIR_SAR_2_20150514T003749_20150514T004505_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T021246_20150514T021328_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T022016_20150514T022428_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T022641_20150514T022820_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T023036_20150514T023151_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T031936_20150514T032013_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T034252_20150514T034341_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T034345_20150514T034425_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T035623_20150514T040341_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T040911_20150514T041123_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T041608_20150514T041815_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T044454_20150514T044656_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T045803_20150514T045941_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T053437_20150514T053549_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T053654_20150514T053826_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T053850_20150514T054405_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T062343_20150514T062625_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T071305_20150514T071426_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T071609_20150514T071730_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T071753_20150514T072551_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T080243_20150514T080617_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T084707_20150514T084732_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T085624_20150514T090517_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T090552_20150514T090608_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T094205_20150514T094458_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T103227_20150514T103408_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T103723_20150514T104505_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T113329_20150514T113931_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T121620_20150514T122202_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T122610_20150514T122833_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T131146_20150514T131704_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T135216_20150514T135320_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T135535_20150514T140220_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T143908_20150514T143951_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T153358_20150514T153919_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T155410_20150514T155449_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T161805_20150514T161946_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T171218_20150514T172203_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T184943_20150514T185719_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T185744_20150514T190224_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T194859_20150514T195154_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T202659_20150514T202707_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T202827_20150514T203653_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T203704_20150514T203834_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T204054_20150514T204421_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T220714_20150514T221657_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T221855_20150514T222909_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T225200_20150514T225833_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T230901_20150514T231051_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2_20150514T234900_20150514T235432_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	18	0	0	0	0
SIR_LRM_1B	153	0	0	0	0
SIR_LRM_2	151	0	0	0	0
SIR_SAR_1B	121	0	0	0	0
SIR_SAR_2A	119	0	0	0	0
SIR_SIN_1B	101	0	0	0	0
SIR_SIN_2	101	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: 2

Product	Test Failed	Description
CS_OFFL_SIR_GOP_1B_20150514T084824_20150514T084941_B001	Power scaling error	There has been an error in the scaling of the L1B waveform
CS_OFFL_SIR_GOP_1B_20150514T204421_20150514T204539_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: 45

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: 233

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: 210