1. Overview

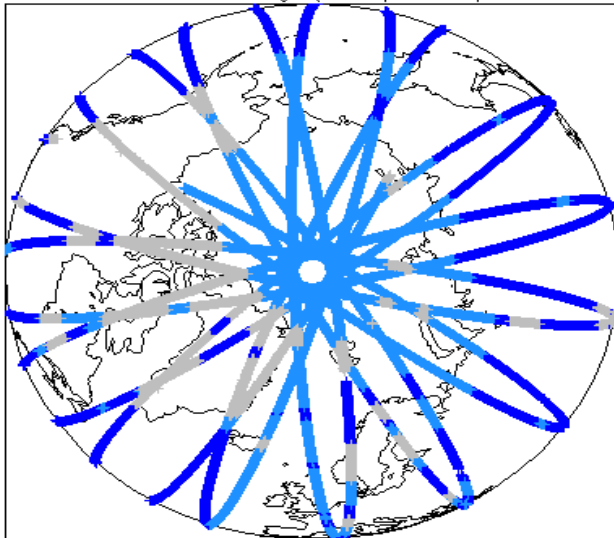| Report Production Date:	Data Used:	OFFLINE L1B and L2 Science Data	Geophysical Ocean Products (GOP) L1B and L2 Science Data
08-Jun-2015	Check	Status	Status
	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
	Product Software Check	Nominal	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

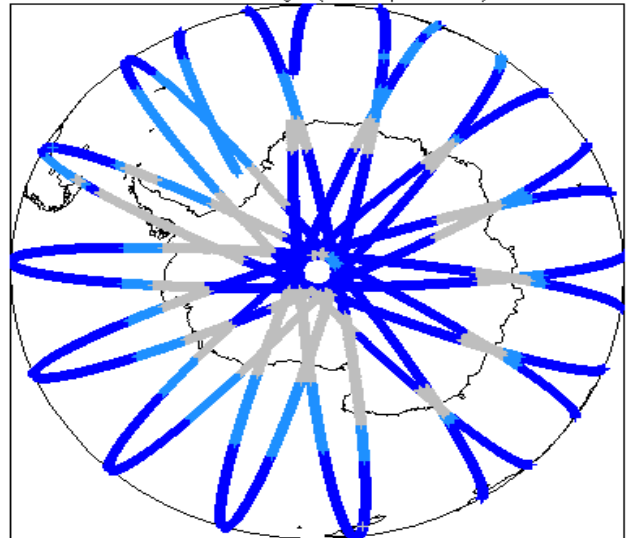| Mission / Instrument News	
04-May-2015	None
05-May-2015	None
06-May-2015	SIRAL unavailability on 6-May-2015 from 03:11:00 to 08:12:32; and from 15:44:00 to 18:55:15 due to planned instrument roll manoeuvres.

Report Contents

2. Global Coverage

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

Global Coverage
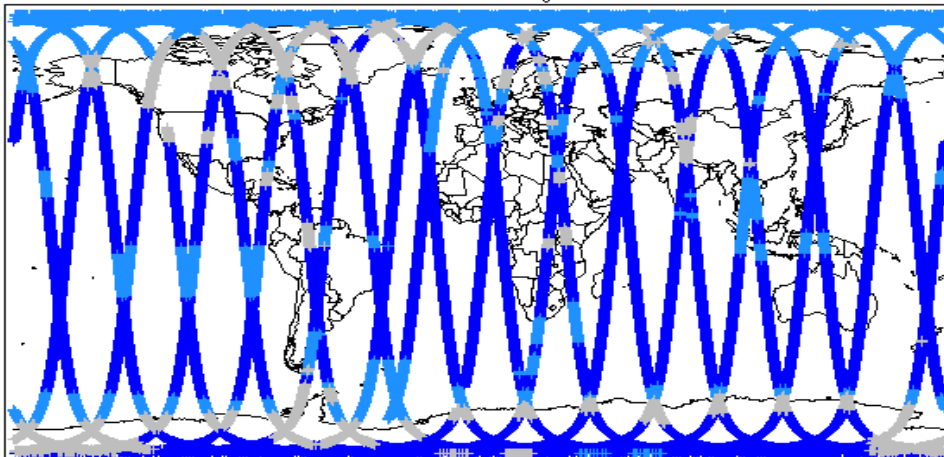
Mode Coverage (%)	
LRM	66.11
SAR	22.56
SIN	11.13

Mode Coverage

Surface Type

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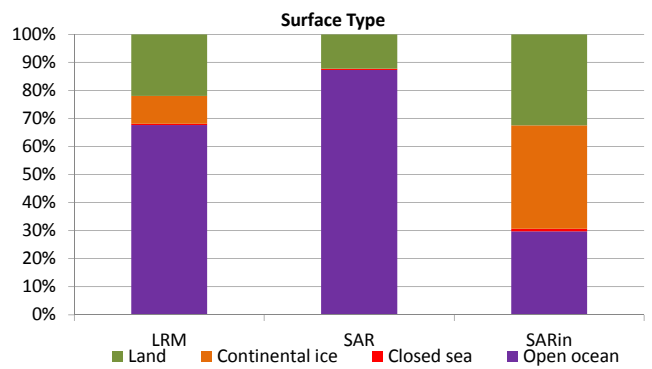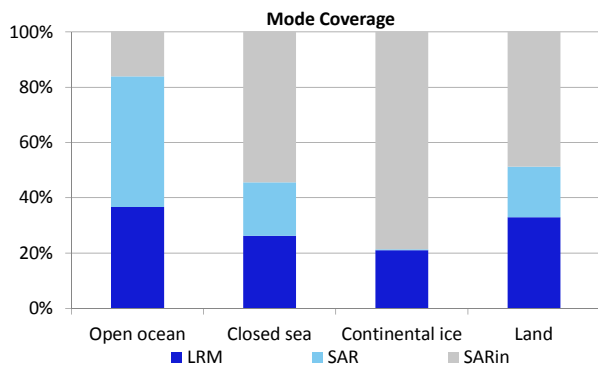
3. Instrument Configuration

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_20150505T200910_20150505T201147_C001	Echo error	The tracking echo has returned an error

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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: 46

Product	Test Failed	Description
CS_OFFL_SIR_SAR_2__20150505T000105_20150505T000652_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T001047_20150505T001131_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T013909_20150505T014539_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T021947_20150505T022344_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T030015_20150505T030326_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T030330_20150505T030441_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T031900_20150505T032027_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T032041_20150505T032505_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T032722_20150505T032809_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T033038_20150505T033256_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T034008_20150505T034129_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T045627_20150505T045852_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T045906_20150505T050003_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T050024_20150505T050431_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T062927_20150505T063004_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T063450_20150505T064510_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T070755_20150505T071324_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T081206_20150505T081248_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T081411_20150505T081442_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T081641_20150505T081738_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T081824_20150505T082611_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T094537_20150505T094729_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T095525_20150505T095745_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T095817_20150505T100910_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T113755_20150505T114532_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T114709_20150505T114901_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T123323_20150505T124007_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T131704_20150505T132225_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T141228_20150505T141444_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T145601_20150505T150300_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T151637_20150505T152452_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T155235_20150505T155407_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T162032_20150505T162253_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T163422_20150505T163927_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T164006_20150505T164215_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T181123_20150505T181959_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T182021_20150505T182252_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T194834_20150505T194914_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T195034_20150505T200018_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T200137_20150505T200307_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T200724_20150505T200910_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T212542_20150505T213724_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T214333_20150505T214518_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T230416_20150505T230649_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T230810_20150505T231920_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150505T235242_20150505T235940_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	137	0	0	0	0
SIR_LRM_2	137	0	0	0	0
SIR_SAR_1B	123	0	0	0	0
SIR_SAR_2A	122	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 Auxilary 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_20150505T200910_20150505T201147_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: 44

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: 220

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: 201