IDEAS+ Daily Report for OFFLINE and GOP data: 03/03/2015

1. Overview

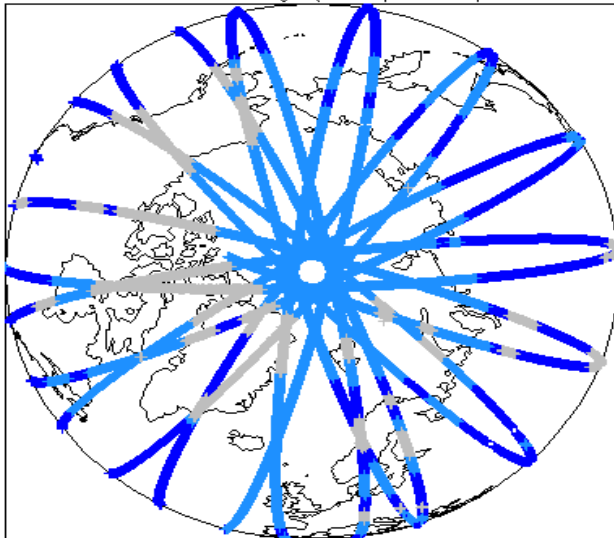| Report Production Date:	Data Used:	OFFLINE L1B and L2 Science Data	Geophysical Ocean Products (GOP) L1B and L2 Science Data
21-Apr-2015	Check	Status	Status
	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
	Product Software Check	Nominal	Nominal
	Product Format Check	Nominal	Nominal
	Product Header Analysis	Nominal	Nominal
	Auxiliary Data File Usage Check	See Section 5.3	Nominal
	Auxiliary Correction Data Check	Nominal	Nominal
	Measurement Confidence Data Check	See Section 5.5	See Section 7.6, 8.5 and 8.6

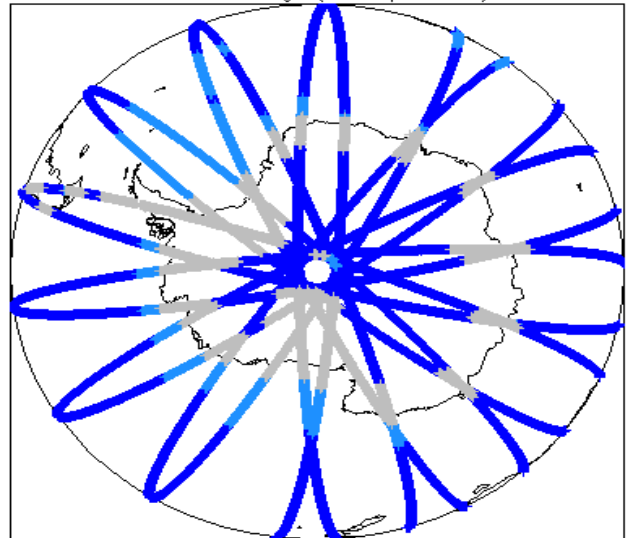| Mission / Instrument News	
02-Mar-2015	Data generated with new Baseline-C IPFs but old GDR-D orbit files.
03-Mar-2015	Data generated with new Baseline-C IPFs but old GDR-D orbit files.
04-Mar-2015	Data generated with new Baseline-C IPFs but old GDR-D orbit files.

Report Contents

2. Global Coverage

Global Coverage (north pole view)

Global Coverage (south pole view)

Global Coverage
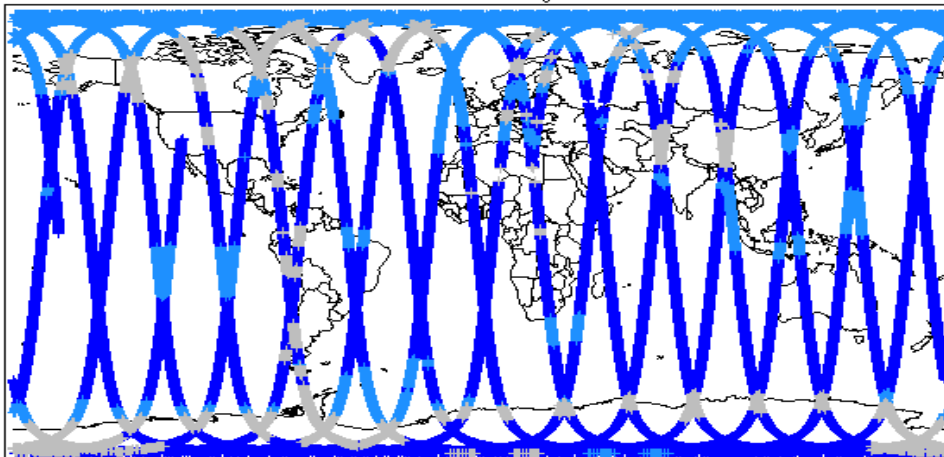
Mode Coverage (%)		
	LRM	67.21
	SAR	21.34
	SIN	11.26

Mode Coverage

Surface Type
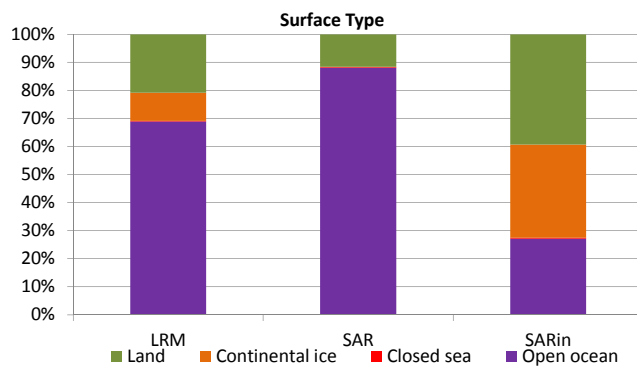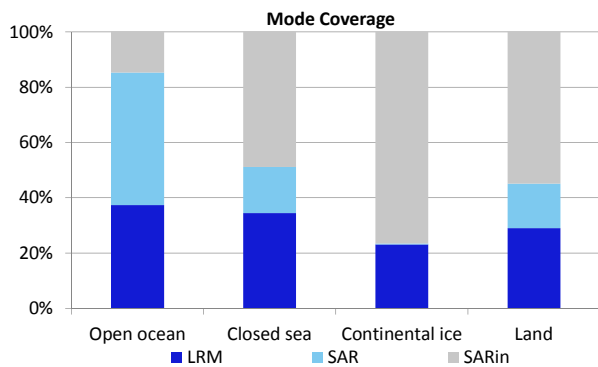
3. Instrument Configuration

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

SIRAL instrument(s) in use:	SIRAL - A

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: 1

Product	AUX File	Comment
CS_OFFL_SIR_GDR_2__20150303T231633_20150304T005546_C001	CS_OPER_AUX_ORBDOR_20150302T215525_20150304T002325_0001	Coverage missing for intervals [2015-03-04T00:23:25, 2015-03-04T00:55:46]

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: 33

Product	Test Failed	Description
CS_OFFL_SIR_SAR_2__20150303T002246_20150303T003437_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T003522_20150303T003623_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T020510_20150303T022715_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T025336_20150303T025655_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T034626_20150303T035212_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T041457_20150303T041643_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T043058_20150303T043535_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T052439_20150303T053120_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T053431_20150303T053908_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T064512_20150303T064938_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T070351_20150303T071035_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T071627_20150303T071847_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T084426_20150303T084527_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T084552_20150303T085050_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T102246_20150303T103249_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T120256_20150303T121142_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T134422_20150303T135207_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T152325_20150303T153039_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T153257_20150303T153759_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T161844_20150303T162456_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T163809_20150303T164023_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T165756_20150303T170022_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T170239_20150303T170934_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T171744_20150303T171948_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T184115_20150303T184732_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T190251_20150303T190322_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T201937_20150303T202841_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T215629_20150303T220411_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T220448_20150303T220620_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T220715_20150303T220857_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T225603_20150303T225723_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T233556_20150303T234536_C001	Peakiness error	There is an error in the peakiness derivation
CS_OFFL_SIR_SAR_2__20150303T234732_20150303T234806_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	162	0	0	0	0
SIR_LRM_2	161	0	0	0	0
SIR_SAR_1B	110	0	0	0	0
SIR_SAR_2A	108	0	0	0	0
SIR_SIN_1B	96	0	0	0	0
SIR_SIN_2	96	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: 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: 59

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: 235

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: 214