

1. Overview

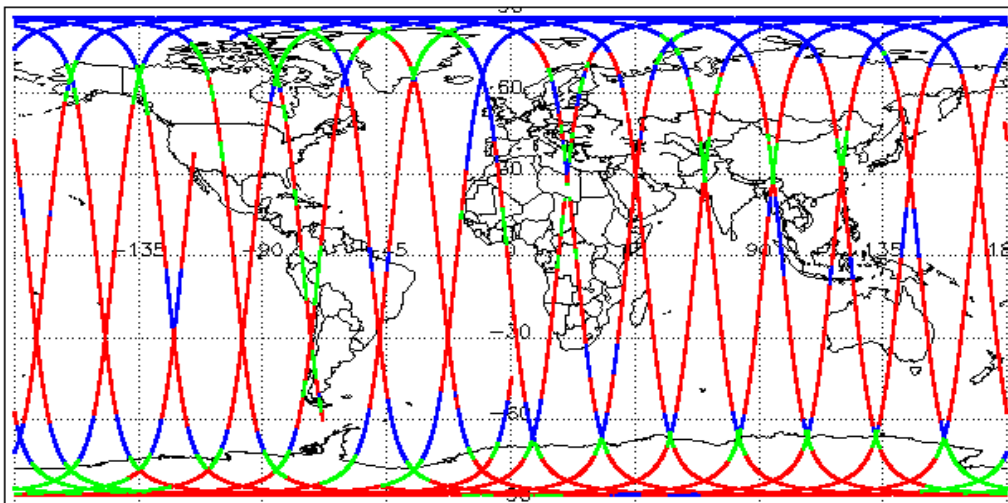
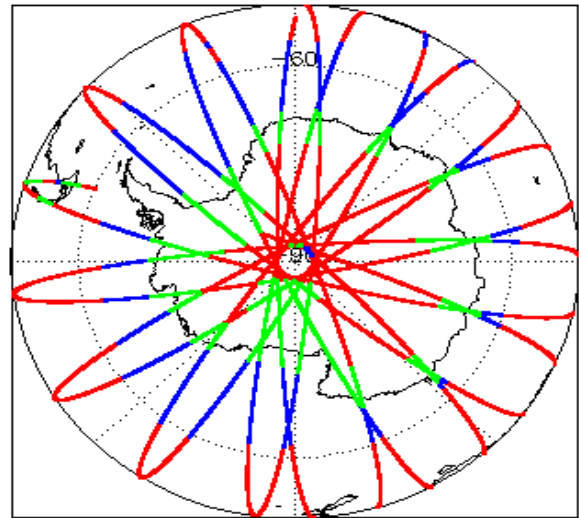
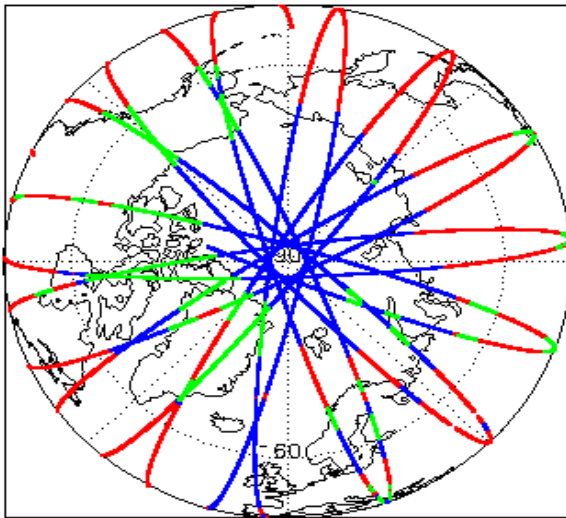
Report Production:	19-Dec-2017
Processor Used:	CryoSat Ocean Processor
Data Used:	Geophysical Ocean Products (GOP) L1B, L2 & P2P Science Data

Check	L1 & L2	P2P
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 Error Check	Nominal	Nominal
Measurement Confidence Data Check	See Section 4.5, 4.6	Nominal
Range, SWH & Backscatter Measurement Check	See Section 5.6, 5.7	See Section 6.6, 6.7
Ocean Retracking Quality Check	See Section 5.8	See Section 6.8

Mission / Instrument News

17-Nov-2017	None
18-Nov-2017	None
19-Nov-2017	Nothing planned

2. Global Coverage



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. GOP 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 binary 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

CryoSat L1B data includes a correction error flag for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 0

4.5 L1B Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 51

Product	Test Failed	Description
CS_OFFL_SIR_GOPR1B_20171118T001623_20171118T002002_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T005607_20171118T010303_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T010734_20171118T011804_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T014043_20171118T014741_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T015750_20171118T015943_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T023555_20171118T023714_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T024810_20171118T024815_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T030547_20171118T030731_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T035341_20171118T035542_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T041535_20171118T041739_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T041739_20171118T042212_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T053607_20171118T054059_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T055431_20171118T060126_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T060718_20171118T060756_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T064216_20171118T064415_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T073644_20171118T074141_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T082031_20171118T082358_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T083534_20171118T083727_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T095920_20171118T100351_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T101405_20171118T101649_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T104350_20171118T104422_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T105431_20171118T110232_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T110442_20171118T110543_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T111746_20171118T111808_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T113924_20171118T114259_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T115258_20171118T115705_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T122136_20171118T122200_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T122348_20171118T122706_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T122706_20171118T123118_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T123513_20171118T124252_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T133143_20171118T133534_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T133705_20171118T133723_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T140905_20171118T140912_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T141416_20171118T142129_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T143601_20171118T144042_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T150519_20171118T150525_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T150931_20171118T151546_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T152858_20171118T153113_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T155330_20171118T155629_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T162102_20171118T162241_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T164430_20171118T164436_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T181516_20171118T181645_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T191029_20171118T191656_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T195425_20171118T195617_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T200753_20171118T201037_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T205807_20171118T205939_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T223820_20171118T223857_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T224020_20171118T224132_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T224712_20171118T224810_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T231131_20171118T231545_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171118T232530_20171118T232921_C001	Attitude correction missing	The attitude has not been corrected

4.6 L1B Waveform Group Data Check

CryoSat L1B data includes a waveform data flag 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 products over land, but this is to be expected.

Number of products with errors: 22

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20171118T002002_20171118T005552_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20171118T033827_20171118T035341_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20171118T035542_20171118T040506_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20171118T124252_20171118T131813_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20171118T153113_20171118T154754_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20171118T171104_20171118T171451_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20171118T015212_20171118T015750_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20171118T024304_20171118T024810_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20171118T042212_20171118T042319_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20171118T073618_20171118T073644_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20171118T123313_20171118T123513_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20171118T172653_20171118T173207_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20171118T214538_20171118T214650_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171118T014043_20171118T014741_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171118T041739_20171118T042212_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171118T073644_20171118T074141_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171118T082031_20171118T082358_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171118T091419_20171118T092340_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171118T131813_20171118T132006_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171118T150931_20171118T151546_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171118T191029_20171118T191656_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171118T204721_20171118T205502_C001	Loss of Echo	The tracking echo is missing for one or more records

5. GOP 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 binary 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

For all products, the auxiliary corrections within the Geophysical Group are checked for the default error value (32767).

Number of products with errors: 0

5.5 L2 Measurement Confidence Data Check

CryoSat L2 data includes a measurement confidence flag for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 0

5.6 L2 Range Measurement Check

CryoSat L2 data includes an Ocean and Ice Range Averaging Status flag for each measurement record. The bit value of this flag indicates any problems when set.

Currently, there are two common status flags raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.

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 products over land, but this is to be expected.

Number of products with errors: 79

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20171118T002002_20171118T005552_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T010710_20171118T010734_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T011804_20171118T012231_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T012306_20171118T014043_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T015017_20171118T015212_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T015943_20171118T021356_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T022116_20171118T023345_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.

CS_OFFL_SIR_GOPM_2_20171118T183100_20171118T185400_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T193042_20171118T195425_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T195736_20171118T200300_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T200306_20171118T200632_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T201037_20171118T202101_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T202639_20171118T204237_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T210702_20171118T212640_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T212927_20171118T213337_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T213737_20171118T214538_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T215106_20171118T222253_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T223607_20171118T223716_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T225755_20171118T231131_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T231711_20171118T232226_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T232921_20171118T235040_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T235325_20171119T000508_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20171118T033123_20171118T033222_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20171118T064415_20171118T064602_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20171118T171451_20171118T171614_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20171118T204237_20171118T204721_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPR_2_20171118T050253_20171118T050509_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPR_2_20171118T213337_20171118T213612_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.

5.7 L2 SWH and Backscatter Measurement Check

CryoSat L2 data includes a SWH Averaging Status flag and an Ocean and Ice Backscatter Averaging Status flag for each measurement record. The bit value of this flag indicates any problems when set.

Currently, there are three common status flags raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.

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 products over land, but this is to be expected.

Number of products with errors: 74

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20171118T002002_20171118T005552_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T010710_20171118T010734_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T011804_20171118T012231_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T012306_20171118T014043_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T015017_20171118T015212_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T015943_20171118T021356_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T022116_20171118T023345_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T024815_20171118T030547_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T030731_20171118T032142_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T033222_20171118T033624_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T033827_20171118T035341_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T035542_20171118T040506_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T042805_20171118T044431_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T045927_20171118T050253_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T050719_20171118T051527_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T051822_20171118T053312_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T060850_20171118T064216_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T064841_20171118T065407_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T065823_20171118T072157_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T075527_20171118T080512_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T081049_20171118T082031_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171118T082810_20171118T083411_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.

5.8 L2 Ocean Retracking Quality Check

CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Ocean Retracking Quality Flag: This flag is currently set for products over land and sea ice, but this is to be expected. The number of products with this error flag set is given below.

Number of products with errors: 56

6. GOP L2 Pole-to-Pole Data Quality Check

6.1 P2P 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 NetCDF product file (.nc).

Number of products with errors: 0

6.2 P2P 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

6.3 P2P 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

6.4 P2P Auxiliary Correction Error Check

For all products, the auxiliary corrections within the Geophysical Group are checked for the default error value (32767).

Number of products with errors: 0

6.5 P2P Measurement Confidence Data Check

CryoSat P2P data includes a measurement confidence flag for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 0

6.6 P2P Range Measurement Check

CryoSat P2P data includes an Ocean and Ice Range Averaging Status flag for each measurement record. The bit value of this flag indicates any problems when set.

Currently, there are two common status flags raised in the P2P products which are expected due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.

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 products over land, but this is to be expected.

Number of products with errors: 28

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20171117T232257_20171118T001231_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T001231_20171118T010210_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T010210_20171118T015144_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T015144_20171118T024124_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T024124_20171118T033058_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T033058_20171118T042037_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T042037_20171118T051011_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T055951_20171118T064925_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T064925_20171118T073905_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T073905_20171118T082839_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T082839_20171118T091818_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T091818_20171118T100752_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T100752_20171118T105732_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T105732_20171118T114706_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T123645_20171118T132619_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T132619_20171118T141559_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T141559_20171118T150533_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T150533_20171118T155512_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T155512_20171118T164446_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T164446_20171118T173426_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T173426_20171118T182400_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T182400_20171118T191339_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T191339_20171118T200313_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T200313_20171118T205253_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.

CS_OFFL_SIR_GOP_2_20171118T205253_20171118T214227_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T214227_20171118T223207_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T223207_20171118T232141_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T232141_20171119T001120_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.

6.7 P2P SWH and Backscatter Measurement Check

CryoSat P2P data includes a SWH Averaging Status flag and an Ocean and Ice Backscatter Averaging Status flag for each measurement record. The bit value of this flag indicates any problems when set.

Currently, there are three common status flags raised in the P2P products which are expected due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.

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 products over land, but this is to be expected.

Number of products with errors: 28

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20171117T232257_20171118T001231_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T001231_20171118T010210_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T010210_20171118T015144_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T015144_20171118T024124_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T024124_20171118T033058_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T033058_20171118T042037_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T042037_20171118T051011_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T055951_20171118T064925_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T064925_20171118T073905_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T073905_20171118T082839_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T082839_20171118T091818_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T091818_20171118T100752_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T100752_20171118T105732_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T105732_20171118T114706_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T123645_20171118T132619_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T132619_20171118T141559_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T141559_20171118T150533_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T150533_20171118T155512_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T155512_20171118T164446_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T164446_20171118T173426_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T173426_20171118T182400_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T182400_20171118T191339_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T191339_20171118T200313_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T200313_20171118T205253_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T205253_20171118T214227_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T214227_20171118T223207_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T223207_20171118T232141_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.

6.8 P2P Ocean Retracking Quality Check

Cryosat P2P data includes an ocean retracking quality flag (field 19) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Ocean Retracking Quality Flag: This flag is currently set for products over land and sea ice, but this is to be expected. The number of products with this error flag set is given below.

Number of products with errors: 25

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20171118T001231_20171118T010210_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T010210_20171118T015144_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T015144_20171118T024124_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T024124_20171118T033058_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T033058_20171118T042037_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T042037_20171118T051011_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T055951_20171118T064925_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T064925_20171118T073905_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T073905_20171118T082839_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T082839_20171118T091818_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T091818_20171118T100752_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T100752_20171118T105732_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T105732_20171118T114706_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T123645_20171118T132619_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T132619_20171118T141559_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T141559_20171118T150533_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T150533_20171118T155512_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T155512_20171118T164446_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T164446_20171118T173426_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T173426_20171118T182400_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T182400_20171118T191339_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T191339_20171118T200313_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T200313_20171118T205253_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T205253_20171118T214227_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171118T232141_20171119T001120_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.