

1. Overview

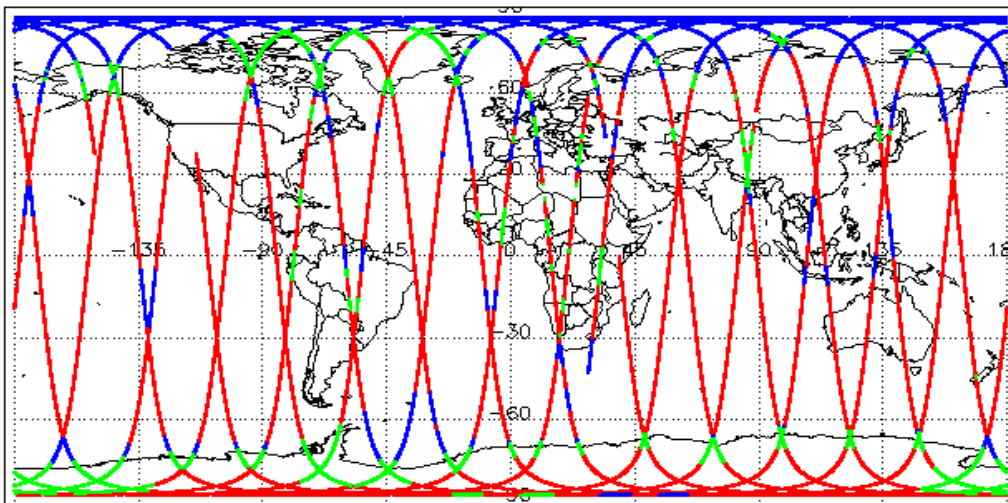
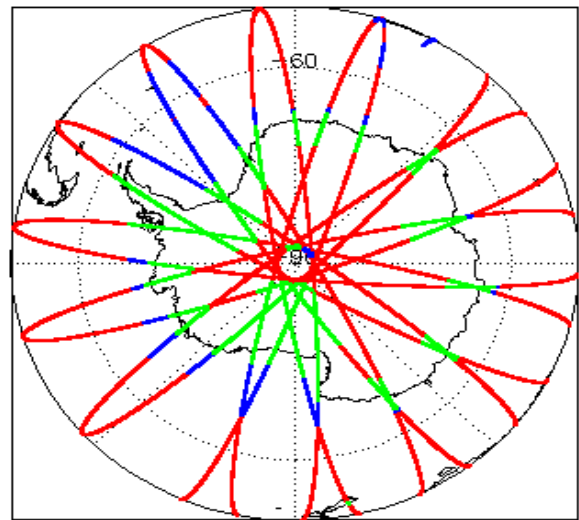
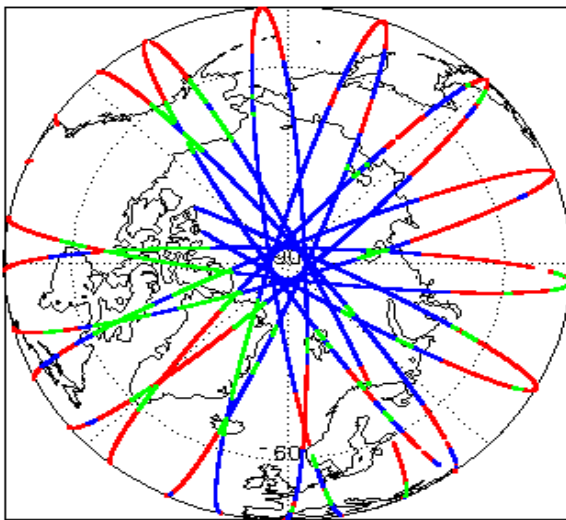
Report Production:	11-Mar-2019
Processor Used:	CryoSat Ocean Processor
Data Used:	Geophysical Ocean Products (GOP) L1B, L2 & P2P Science Data

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

06-Feb-2019	None
07-Feb-2019	None
08-Feb-2019	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.

Attitude Correction Missing: This flag is currently set in error for GOPR products due to a configuration issue. This is being investigated and will be updated in the next SW update.

Number of products with errors: 0

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 some products over land, but this is to be expected.

Number of products with errors: 11

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20190207T004702_20190207T004807_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20190207T092645_20190207T095645_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20190207T015616_20190207T015646_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20190207T051909_20190207T052018_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20190207T114556_20190207T114622_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20190207T150148_20190207T150550_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20190207T165833_20190207T165851_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20190207T181758_20190207T182055_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20190207T014458_20190207T014715_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20190207T165505_20190207T165641_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20190207T233508_20190207T233708_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: 81

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20190206T233025_20190207T000533_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T004918_20190207T005744_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T005925_20190207T010445_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T011015_20190207T013257_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T013543_20190207T014458_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T015715_20190207T020116_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.

CS_OFFL_SIR_GOPM_2_20190207T185318_20190207T190751_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T191003_20190207T191503_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T191529_20190207T191538_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T192130_20190207T195526_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T202317_20190207T204756_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T205049_20190207T205420_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T205442_20190207T205811_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T210028_20190207T212949_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T215159_20190207T222700_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T222831_20190207T223334_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T223341_20190207T223709_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T224017_20190207T225144_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T225721_20190207T231451_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T233816_20190207T234725_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20190207T071532_20190207T071816_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20190207T073546_20190207T073728_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20190207T114324_20190207T114344_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20190207T165104_20190207T165111_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20190207T200741_20190207T200814_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20190207T223709_20190207T223844_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPR_2_20190207T004807_20190207T004918_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPR_2_20190207T015440_20190207T015616_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPR_2_20190207T042916_20190207T042924_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPR_2_20190207T052018_20190207T052022_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: 81

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20190206T233025_20190207T000533_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_20190207T001849_20190207T001940_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_20190207T004918_20190207T005744_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_20190207T005925_20190207T010445_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T011015_20190207T013257_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_20190207T013543_20190207T014458_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_20190207T015715_20190207T020116_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_20190207T021702_20190207T022147_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_20190207T022335_20190207T023653_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_20190207T024938_20190207T025543_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_20190207T025553_20190207T032148_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_20190207T034005_20190207T034705_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_20190207T034728_20190207T041122_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_20190207T042924_20190207T044715_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_20190207T045139_20190207T045851_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_20190207T051452_20190207T051909_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20190207T052412_20190207T053555_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_20190207T054214_20190207T055353_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_20190207T055942_20190207T060205_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.

CS_OFFL_SIR_GOPM_2_20190207T233816_20190207T234725_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_GOPN_2_20190207T071532_20190207T071816_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_GOPN_2_20190207T073546_20190207T073728_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20190207T114324_20190207T114344_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_GOPN_2_20190207T165104_20190207T165111_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_GOPN_2_20190207T200741_20190207T200814_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_GOPN_2_20190207T223709_20190207T223844_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_GOPR_2_20190207T004807_20190207T004918_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_GOPR_2_20190207T015440_20190207T015616_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_GOPR_2_20190207T042916_20190207T042924_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_GOPR_2_20190207T052018_20190207T052022_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have 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: 29

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20190206T232442_20190207T001419_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20190207T001419_20190207T010355_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_20190207T010355_20190207T015332_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20190207T015332_20190207T024309_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_20190207T024309_20190207T033246_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20190207T033246_20190207T042222_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20190207T042222_20190207T051159_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_20190207T051159_20190207T060136_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_20190207T060136_20190207T065113_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_20190207T065113_20190207T074049_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_20190207T074049_20190207T083027_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_20190207T083027_20190207T092003_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20190207T092003_20190207T100940_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_20190207T100940_20190207T105917_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.

CS_OFFL_SIR_GOP_2_20190207T105917_20190207T114854_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_20190207T114854_20190207T123830_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20190207T123830_20190207T132807_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_20190207T132807_20190207T141744_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_20190207T141744_20190207T150721_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_20190207T150721_20190207T155657_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_20190207T155657_20190207T164634_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20190207T164634_20190207T173611_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_20190207T173611_20190207T182548_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20190207T182548_20190207T191524_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_20190207T191524_20190207T200501_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20190207T200501_20190207T205438_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_20190207T205438_20190207T214415_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_20190207T214415_20190207T223352_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_20190207T223352_20190207T232329_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: 29

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20190206T232442_20190207T001419_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_20190207T001419_20190207T010355_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_20190207T010355_20190207T015332_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_20190207T015332_20190207T024309_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_20190207T024309_20190207T033246_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_20190207T033246_20190207T042222_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_20190207T042222_20190207T051159_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_20190207T051159_20190207T060136_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_20190207T060136_20190207T065113_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_20190207T065113_20190207T074049_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_20190207T074049_20190207T083027_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_20190207T083027_20190207T092003_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_20190207T092003_20190207T100940_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_20190207T100940_20190207T105917_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_20190207T105917_20190207T114854_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_20190207T114854_20190207T123830_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_20190207T123830_20190207T132807_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_20190207T132807_20190207T141744_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_20190207T141744_20190207T150721_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__20190207T150721_20190207T155657_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__20190207T155657_20190207T164634_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__20190207T164634_20190207T173611_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__20190207T173611_20190207T182548_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__20190207T182548_20190207T191524_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__20190207T191524_20190207T200501_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__20190207T200501_20190207T205438_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__20190207T205438_20190207T214415_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__20190207T214415_20190207T223352_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__20190207T223352_20190207T232329_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean 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: 29

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2__20190206T232442_20190207T001419_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T001419_20190207T010355_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T015332_20190207T024309_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T024309_20190207T033246_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T033246_20190207T042222_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T042222_20190207T051159_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T051159_20190207T060136_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T060136_20190207T065113_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T065113_20190207T074049_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T074049_20190207T083027_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T083027_20190207T092003_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T092003_20190207T100940_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T100940_20190207T105917_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T105917_20190207T114854_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T114854_20190207T123830_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T123830_20190207T132807_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T132807_20190207T141744_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T141744_20190207T150721_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T150721_20190207T155657_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T155657_20190207T164634_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T164634_20190207T173611_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T173611_20190207T182548_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T182548_20190207T191524_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T191524_20190207T200501_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T200501_20190207T205438_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T205438_20190207T214415_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T214415_20190207T223352_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T223352_20190207T232329_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20190207T232329_20190208T001305_C002	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.