



## 1. Overview

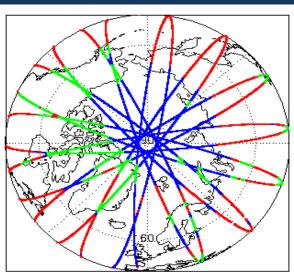
Report Production:	18-Dec-2017
Processor Used:	CryoSat Ocean Processor
Data Used:	Geophysical Ocean Products (GOP) L1B, L2 & P2P Science Data

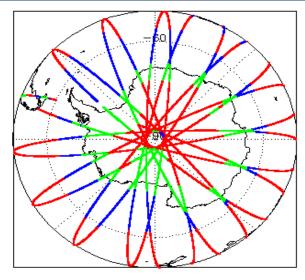
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary 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

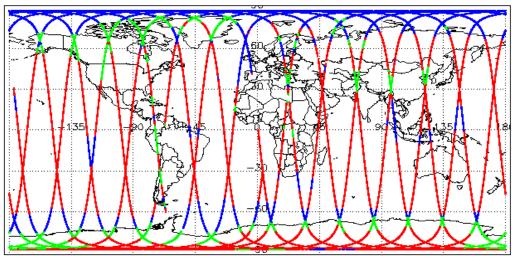
Mission / Instru	
13-Nov-2017	None

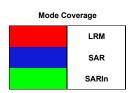
14-Nov-2017 None 15-Nov-2017 Nothing planned

## 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

## 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.

# 4.3 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:

#### 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:

## 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:

52

Number of products with errors: 52		
Product	Test Failed	Description
CS_OFFL_SIR_GOPR1B_20171114T000714_20171114T001134_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T002113_20171114T002500_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T011227_20171114T012242_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T022126_20171114T022607_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T024231_20171114T024648_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T031057_20171114T031223_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T032619_20171114T033059_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T034256_20171114T034319_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T035835_20171114T040036_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T042418_20171114T042703_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T043050_20171114T043132_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T050944_20171114T050955_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T061212_20171114T061239_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T064716_20171114T064905_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T070128_20171114T070309_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T074140_20171114T074631_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T082536_20171114T082833_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_201711114T091912_201711114T092828_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T100401_20171114T100839_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T101900_20171114T102134_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T102531_20171114T102854_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T114419_20171114T114754_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T123630_20171114T123839_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T124001_20171114T124727_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T124730_20171114T124741_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T133114_20171114T133120_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T140631_20171114T140648_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T144053_20171114T144534_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T150244_20171114T150315_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T153351_20171114T153605_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T155824_20171114T160531_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T165947_20171114T170058_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T171632_20171114T171724_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T173124_20171114T173151_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T174316_20171114T174419_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T180206_20171114T180259_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T183351_20171114T183553_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T191526_20171114T191541_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T191541_20171114T192424_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T195920_20171114T200114_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T201244_20171114T201529_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T205218_20171114T205956_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T210022_20171114T210140_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T210306_20171114T210426_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T213222_20171114T213416_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T213830_20171114T214101_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T215144_20171114T215557_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T222927_20171114T222955_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T222958_20171114T223015_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T223148_20171114T223816_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T224513_20171114T224606_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_GOPR1B_20171114T235532_20171114T235818_C001	Attitude correction missing	The attitude has not been corrected
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#### 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_20171114T075913_20171114T081004_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20171114T144700_20171114T150244_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20171114T170639_20171114T170949_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_201711114T224229_201711114T224320_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_201711114T024759_201711114T025244_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_201711114T042703_201711114T042812_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_201711114T060620_201711114T061212_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20171114T105540_20171114T105641_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20171114T151230_20171114T151423_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20171114T155711_20171114T155824_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20171114T173151_20171114T173703_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_201711114T204706_201711114T205218_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_201711114T014534_201711114T015227_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_201711114T020237_201711114T020438_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171114T032619_20171114T033059_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_201711114T074012_201711114T074108_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171114T122839_20171114T123146_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171114T123146_20171114T123610_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171114T173703_20171114T174313_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171114T210022_20171114T210140_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171114T213830_20171114T214101_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20171114T233026_20171114T233412_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:

#### 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:

#### 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:

#### 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:

#### 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:

#### 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.

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20171113T235139_20171114T000714_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T001253_20171114T001802_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T002500_20171114T010015_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T011055_20171114T011135_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T012242_20171114T012703_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T012758_20171114T014534_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T015506_20171114T015705_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.

		The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T020438_20171114T022126_C001	Ocean Range Averaging Status	records.  The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T022607_20171114T023902_C001	Ocean Range Averaging Status	records.  The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T025304_20171114T031057_C001	Ocean Range Averaging Status	records.
CS_OFFL_SIR_GOPM_2_20171114T031223_20171114T032619_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T033414_20171114T033615_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T033721_20171114T034117_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T034319_20171114T035834_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T040036_20171114T041000_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T043242_20171114T044902_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T050503_20171114T050737_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T051218_20171114T052018_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T052316_20171114T053742_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T061336_20171114T064716_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T065329_20171114T065904_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T070309_20171114T072652_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T075913_20171114T081004_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T081540_20171114T082536_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T083302_20171114T083740_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T083828_20171114T083858_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T084220_20171114T090907_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T091653_20171114T091912_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T093244_20171114T100401_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T101212_20171114T101744_C001	Ice Range Averaging Status	records.  The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T102134_20171114T102531_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
		records.  The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T105641_20171114T105928_C001	Ocean Range Averaging Status	records.  The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T111129_20171114T114419_C001	Ocean Range Averaging Status	records.  The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T115115_20171114T115627_C001	Ice Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T120159_20171114T121647_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T123610_20171114T123630_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T124758_20171114T132303_C001	Ocean Range Averaging Status	records. The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T133120_20171114T133128_C001	Ice Range Averaging Status	records. The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T133131_20171114T133528_C001	Ice Range Averaging Status	records.  The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T134027_20171114T140631_C001	Ocean Range Averaging Status	records.  The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T140648_20171114T141400_C001	Ocean Range Averaging Status	records.  The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T141519_20171114T141801_C001	Ice Range Averaging Status	records.
CS_OFFL_SIR_GOPM_2_20171114T142859_20171114T144053_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T144534_20171114T144657_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T144700_20171114T150244_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T150455_20171114T151012_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T151031_20171114T151230_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T152055_20171114T153351_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T153605_20171114T155306_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T161528_20171114T162554_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T162733_20171114T164119_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T164420_20171114T164923_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T165755_20171114T165852_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T170639_20171114T170949_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T171724_20171114T171943_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T172106_20171114T172817_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T180259_20171114T182018_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T182429_20171114T182840_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
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CS_OFFL_SIR_GOPM_2_20171114T183553_20171114T190039_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T193532_20171114T195920_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T200229_20171114T200753_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T200800_20171114T201125_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T201529_20171114T202554_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T203131_20171114T204706_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T211029_20171114T213222_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T213416_20171114T213830_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T214225_20171114T215032_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T215557_20171114T222757_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T224057_20171114T224213_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T230125_20171114T231043_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T231117_20171114T231622_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T232202_20171114T232720_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T233412_20171114T235532_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T235818_20171115T000841_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20171114T215032_20171114T215144_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPN_2_20171114T232720_20171114T233026_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPR_2_20171114T032619_201711114T033059_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPR_2_20171114T061321_201711114T061336_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPR_2_20171114T104627_20171114T104708_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.

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20171113T235139_20171114T000714_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_20171114T001253_20171114T001802_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T002500_20171114T010015_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_20171114T012242_20171114T012703_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_20171114T012758_20171114T014534_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_20171114T015506_20171114T015705_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T020438_20171114T022126_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_20171114T022607_20171114T023902_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_20171114T025304_20171114T031057_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_20171114T031223_20171114T032619_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_20171114T033414_20171114T033615_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T033721_20171114T034117_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T034319_20171114T035834_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_20171114T040036_20171114T041000_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_20171114T043242_20171114T044902_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_20171114T050503_20171114T050737_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_20171114T051218_20171114T052018_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T052316_20171114T053742_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_20171114T061336_20171114T064716_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_20171114T065329_20171114T065904_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T070309_20171114T072652_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_20171114T075913_20171114T081004_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_20171114T081540_20171114T082536_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_20171114T083302_20171114T083740_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T083828_20171114T083858_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T084220_20171114T090907_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_20171114T093244_20171114T100401_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_20171114T101212_20171114T101744_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T102134_20171114T102531_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_20171114T105641_20171114T105928_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_20171114T111129_20171114T114419_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_20171114T115115_20171114T115627_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T120159_20171114T121647_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_20171114T123610_20171114T123630_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_20171114T124758_20171114T132303_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_20171114T133120_20171114T133128_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T133131_20171114T133528_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOPM_2_20171114T134027_20171114T140631_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_20171114T140648_20171114T141400_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_20171114T141519_20171114T141801_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T142859_20171114T144053_C001	SWH Averaging Status, Ocean	records. The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T144534_20171114T144657_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T144700_20171114T150244_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T150455_20171114T151012_C001	Backscatter Averaging Status  Ice Backscatter Averaging Status	more records.  The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T151031_20171114T151230_C001	Ice Backscatter Averaging Status	records. The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T152055_20171114T153351_C001	SWH Averaging Status, Ocean	records. The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T153605_20171114T155306_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T161528_20171114T162554_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS OFFL SIR GOPM 2 20171114T162733 20171114T164119 C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records. The SWH and Ocean Averaging Status Flags have been set for one or
CS OFFL SIR GOPM 2 20171114T164420 20171114T164923 C001	Backscatter Averaging Status  Ice Backscatter Averaging Status	more records.  The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T165755_20171114T165852_C001	SWH Averaging Status, Ocean	records. The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T170639_20171114T170949_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T171724_20171114T171943_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records. The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T172106_20171114T172817_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T172940_20171114T173124_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records. The SWH and Ocean Averaging Status Flags have been set for one or
CS OFFL SIR GOPM 2 20171114T175626 20171114T180206 C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T180259_20171114T182018_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records. The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T182429_20171114T182840_C001	Backscatter Averaging Status  Ice Backscatter Averaging Status	more records.  The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T182901_20171114T183051_C001	Ice Backscatter Averaging Status	records.  The Ice Backscatter Averaging Status Flag has been set for one or more
	SWH Averaging Status, Ocean	records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T183553_20171114T190039_C001  CS_OFFL_SIR_GOPM_2_20171114T193532_20171114T195920_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records. The SWH and Ocean Averaging Status Flags have been set for one or
	Backscatter Averaging Status	more records.  The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T200229_20171114T200753_C001	Ice Backscatter Averaging Status	records.  The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T200800_20171114T201125_C001	Ice Backscatter Averaging Status SWH Averaging Status, Ocean	records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T201529_20171114T202554_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T203131_20171114T204706_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T211029_20171114T213222_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records. The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T213416_20171114T213830_C001	Backscatter Averaging Status	more records.  The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T214225_20171114T215032_C001	Ice Backscatter Averaging Status SWH Averaging Status, Ocean	records. The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T215557_20171114T222757_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T230125_20171114T231043_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T231117_20171114T231622_C001	Backscatter Averaging Status	more records.  The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_GOPM_2_20171114T232202_20171114T232720_C001	Ice Backscatter Averaging Status SWH Averaging Status, Ocean	records. The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_GOPM_2_20171114T233412_20171114T235532_C001	Backscatter Averaging Status	more records.

CS_OFFL_SIR_GOPM_2_20171114T235818_20171115T000841_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_20171114T215032_20171114T215144_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_20171114T232720_20171114T233026_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_20171114T032619_20171114T033059_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_20171114T061321_20171114T061336_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_20171114T104627_20171114T104708_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:

#### 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:

#### 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:

#### 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:

#### 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).

0

Number of products with errors:

#### 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:

#### 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.

Test Failed

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.

Description

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:

Product

Froduct	restraileu	Description
CS_OFFL_SIR_GOP_220171113T232750_20171114T001724_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_220171114T001724_20171114T010703_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_20171114T010703_20171114T015637_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T015637_201711114T024617_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T024617_201711114T033551_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_220171114T033551_20171114T042530_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_220171114T042530_20171114T051504_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T051504_201711114T060444_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_220171114T060444_20171114T065418_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T065418_20171114T074357_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_220171114T074357_20171114T083332_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T083332_20171114T092311_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_220171114T092311_20171114T101245_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T101245_20171114T110225_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_220171114T110225_20171114T115159_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_220171114T115159_20171114T124138_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_220171114T124138_20171114T133112_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_20171114T133112_20171114T142052_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_220171114T142052_20171114T151026_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.

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CS_OFFL_SIR_GOP_220171114T151026_20171114T160005_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_220171114T160005_20171114T164939_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_220171114T164939_20171114T173919_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T173919_20171114T182853_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_220171114T182853_20171114T191832_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T191832_201711114T200807_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_220171114T200807_20171114T205746_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T205746_20171114T214720_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_220171114T214720_20171114T223700_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T223700_20171114T232634_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_220171114T232634_20171115T001613_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has 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.

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20171113T232750_20171114T001724_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_20171114T001724_20171114T010703_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_20171114T010703_20171114T015637_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_20171114T015637_20171114T024617_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_20171114T024617_20171114T033551_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_20171114T033551_20171114T042530_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_20171114T042530_20171114T051504_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_20171114T051504_20171114T060444_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_20171114T060444_20171114T065418_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_20171114T065418_20171114T074357_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_20171114T074357_20171114T083332_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_20171114T083332_20171114T092311_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_20171114T092311_20171114T101245_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_20171114T101245_20171114T110225_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_20171114T110225_20171114T115159_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_20171114T115159_20171114T124138_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_20171114T124138_20171114T133112_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_20171114T133112_20171114T142052_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_20171114T142052_20171114T151026_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_20171114T151026_20171114T160005_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_20171114T160005_20171114T164939_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_20171114T164939_20171114T173919_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_20171114T173919_20171114T182853_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_20171114T182853_20171114T191832_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_20171114T191832_20171114T200807_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_220171114T200807_20171114T205746_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_220171114T205746_20171114T214720_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_220171114T214720_20171114T223700_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_20171114T223700_20171114T232634_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_20171114T232634_20171115T001613_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.

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20171114T001724_20171114T010703_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171114T010703_20171114T015637_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171114T015637_20171114T024617_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T024617_201711114T033551_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171114T033551_20171114T042530_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T042530_20171114T051504_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T051504_20171114T060444_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T060444_20171114T065418_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T065418_20171114T074357_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171114T074357_20171114T083332_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T083332_20171114T092311_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T092311_20171114T101245_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T101245_20171114T110225_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T110225_20171114T115159_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T115159_201711114T124138_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T124138_201711114T133112_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T142052_201711114T151026_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T151026_201711114T160005_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T160005_20171114T164939_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T164939_20171114T173919_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T173919_20171114T182853_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T182853_20171114T191832_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T191832_201711114T200807_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T200807_20171114T205746_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T205746_20171114T214720_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171114T214720_20171114T223700_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220171114T223700_20171114T232634_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20171114T232634_20171115T001613_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.