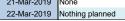


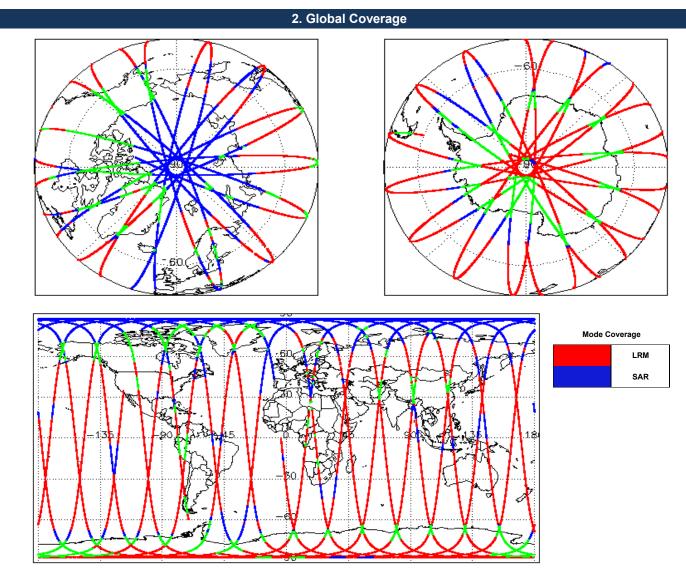
# IDEAS+ Daily Report for IOP data:

# 21/03/2019

		1. Overview		
Dement Dreductions	25 Mar 2010	Check	L1 & L2	P2P
Report Production:	25-Mar-2019	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	Cruce Cat Occore Processor	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Usea:	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal
	Intermediate Ocean Products (IOP)	Product Format Check	Nominal	Nominal
Data Used:	L1B, L2 & P2P Science Data	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 and 5.5	See Section 6.5
		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 20-Mar-2019 None 21-Mar-2019 None





# 3. Instrument Configuration

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

SIRAL - A

0

SIRAL instrument(s) in use:

4. IOP 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:

#### 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 Auxilary Data File Usage Check				
Each product is checked for missing Data Set Descriptors with respect to a pro- Number of products with errors: 0	e-determined baseline and also to	check the validity of Auxiliary Data Files is correct.		
4.4 L1B Auxiliary Correction Error Check				
CryoSat L1B data includes a correction error flag for each measurement recor Number of products with errors: 0	rd. The bit value of this flag indicate	es any problems when set.		
4.5 L1B Measurement Confidence Data Check				
Attitude Correction Missing: This flag is currently set in error for IOPR 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 products over land, but this is to be expected.         Number of products with errors:       13				
4.6 L1B Waveform Group Data Check CryoSat L1B data includes a waveform data flag for each measurement recom	0	s any problems when set.		
4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       13	0	s any problems when set. Description		
4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       13         Product	s to be expected.			
4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement recorn         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       13         Product         CS_OFFL_SIR_IOPM1B_20190321T022130_20190321T022943_C001	s to be expected.	Description		
4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement recorn         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       13         Product       CS_OFFL_SIR_IOPM1B_20190321T022130_20190321T022943_C001         CS_OFFL_SIR_IOPM1B_20190321T214840_20190321T222248_C001	to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records		
4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       13         Product         CS_OFFL_SIR_IOPM1B_20190321T022130_20190321T022943_C001         CS_OFFL_SIR_IOPM1B_20190321T02130_20190321T222248_C001         CS_OFFL_SIR_IOPN1B_20190321T023311_20190321T032448_C001	to be expected.           Test Failed           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records		
4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       13         Product       13         CS_OFFL_SIR_IOPM1B_20190321T022130_20190321T022943_C001         CS_OFFL_SIR_IOPM1B_20190321T0214840_20190321T022248_C001         CS_OFFL_SIR_IOPN1B_20190321T032311_20190321T032448_C001         CS_OFFL_SIR_IOPN1B_20190321T042323_C001	to be expected.  Test Failed Loss of Echo Loss of Echo Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records		
4.6 L1B Waveform Group Data Check CryoSat L1B data includes a waveform data flag for each measurement recor Loss of Echo Flag: This flag is currently set for products over land, but this is	to be expected.           Test Failed           Loss of Echo           Loss of Echo           Loss of Echo           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records		

Loss of Echo

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.

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).

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.

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.

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.

Test Failed

Power scaling error

Power scaling error

5. IOP Level 2 Data Quality Check

The tracking echo is missing for one or more records

The tracking echo is missing for one or more records

The tracking echo is missing for one or more records

The tracking echo is missing for one or more records

The tracking echo is missing for one or more records

The tracking echo is missing for one or more records

Description

There is an error in the scaling of the L2 waveform for one or more records

There is an error in the scaling of the L2 waveform for one or more records

Ocean Range Averaging Status Flag: This flag is currently set for products over land and sea ice, but this is to be expected.

table highlighting any additional issues which may arise from this test.

CS OFFL SIR IOPN1B 20190321T155125 20190321T155341 C001

CS\_OFFL\_SIR\_IOPR1B\_20190321T023118\_20190321T023226\_C001

CS\_OFFL\_SIR\_IOPR1B\_20190321T043135\_20190321T043229\_C001

CS\_OFFL\_SIR\_IOPR1B\_20190321T055552\_20190321T060140\_C001

CS\_OFFL\_SIR\_IOPR1B\_20190321T073232\_20190321T073448\_C001

CS\_OFFL\_SIR\_IOPR1B\_20190321T204735\_20190321T205513\_C001

5.1 L2 Product Format Check

5.2 L2 Product Header Analysis

5.3 L2 Auxiliary Data File Usage Check

5.4 L2 Auxiliary Correction Error Check

5.5 L2 Measurement Confidence Data Check

CS\_OFFL\_SIR\_IOPM\_2\_20190321T060944\_20190321T061532\_C001

CS\_OFFL\_SIR\_IOPM\_2\_20190321T225840\_20190321T231553\_C001

Number of products with errors:

Product

Ice Range Averaging Status Flag: This flag is currently set for products over land, but this is to be expected. 76

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

2

Number of products with errors:

5.6 L2 Range Measurement Check

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20190321T001838_20190321T005226_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.

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

CS\_OFFL\_SIR\_IOPM\_2\_20190321T011806\_20190321T014102\_C001 CS OFFL SIR IOPM 2 20190321T015037 20190321T015230 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T015910\_20190321T021446\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T021450\_20190321T021649\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T022130\_20190321T022943\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T024434\_20190321T024717\_C001 CS OFFL SIR IOPM 2 20190321T024919 20190321T030534 C001 CS OFFL SIR IOPM 2 20190321T030747 20190321T032222 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T032932\_20190321T033141\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T033231\_20190321T033643\_C001 CS OFFL SIR IOPM 2 20190321T033818 20190321T035354 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T035554\_20190321T040515\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T042332\_20190321T042417\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T043334\_20190321T044308\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T044959\_20190321T050504\_C001 CS OFFL SIR IOPM 2 20190321T050726 20190321T051544 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T051740\_20190321T053439\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T053712\_20190321T053923\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T061642\_20190321T064354\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T064622\_20190321T064822\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T064905\_20190321T065410\_C001 CS OFFL SIR IOPM 2 20190321T065650 20190321T072223 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T075423\_20190321T080528\_C001 CS OFFL SIR IOPM 2 20190321T081107 20190321T082239 C001 CS OFFL SIR IOPM 2 20190321T082828 20190321T083429 C001 CS OFFL SIR IOPM 2 20190321T083600 20190321T090445 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T092729\_20190321T100212\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T100736\_20190321T101300\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T101428\_20190321T102053\_C001 CS OFFL SIR IOPM 2 20190321T105109 20190321T105431 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T110709\_20190321T111538\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T111823\_20190321T114130\_C001 CS OFFL SIR IOPM 2 20190321T114632 20190321T114739 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T114744\_20190321T115152\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T115328\_20190321T120744\_C001 CS OFFL SIR IOPM 2 20190321T120842 20190321T121210 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T124556\_20190321T131927\_C001 CS OFFL SIR IOPM 2 20190321T132143 20190321T132637 C001 CS OFFL SIR IOPM 2 20190321T133247 20190321T133450 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T133737\_20190321T140853\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T142900\_20190321T143616\_C001 CS OFFL SIR IOPM 2 20190321T144155 20190321T145844 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T150022\_20190321T150535\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T150611\_20190321T150745\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T151538\_20190321T152914\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T153128\_20190321T154303\_C001 CS OFFL SIR IOPM 2 20190321T161056 20190321T162118 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T162258\_20190321T163752\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T163945\_20190321T164446\_C001 CS OFFL SIR IOPM 2 20190321T164510 20190321T164520 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T165757\_20190321T170628\_C001

Ocean Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ice Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ice Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ice Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ice Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ice Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or more record The Ice Range Averaging Status Flag has been set for one or more ecords 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 records The Ocean Range Averaging Status Flag has been set for one or more records 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 records The Ocean Range Averaging Status Flag has been set for one or more records The Ice Range Averaging Status Flag has been set for one or more records The Ice Range Averaging Status Flag has been set for one or more 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 records The Ice Range Averaging Status Flag has been set for one or more ecords 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 records The Ice Range Averaging Status Flag has been set for one or more ecords 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 records The Ocean Range Averaging Status Flag has been set for one or more ecords The Ice Range Averaging Status Flag has been set for one or more records 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 ecords 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 records 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 records The Ocean Range Averaging Status Flag has been set for one or more ecords 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 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 records The Ocean Range Averaging Status Flag has been set for one or more records The Ice Range Averaging Status Flag has been set for one or more ecords 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 records The Ocean Range Averaging Status Flag has been set for one or more records. 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CS_OFFL_SIR_IOPM_2_20190321T171018_20190321T171505_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T175356_20190321T181703_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T182018_20190321T182402_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T182424_20190321T182715_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T183001_20190321T185859_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T193043_20190321T195626_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T195800_20190321T200316_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T200323_20190321T200649_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T200918_20190321T202117_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T202654_20190321T204324_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T210609_20190321T212529_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T212950_20190321T213624_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T213800_20190321T214351_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T214840_20190321T222248_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T225840_20190321T231553_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T231730_20190321T232242_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T232802_20190321T235053_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPN_2_20190321T100414_20190321T100736_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPN_2_20190321T133026_20190321T133155_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPN_2_20190321T145844_20190321T150022_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190321T082239_20190321T082425_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190321T140854_20190321T140915_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190321T155341_20190321T155536_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190321T162118_20190321T162257_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. 75

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20190321T001838_20190321T005226_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_IOPM_2_20190321T011806_20190321T014102_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_IOPM_2_20190321T014413_20190321T014443_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_IOPM_2_20190321T015037_20190321T015230_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T015910_20190321T021446_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_IOPM_2_20190321T021450_20190321T021649_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_IOPM_2_20190321T022130_20190321T022943_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_IOPM_2_20190321T024434_20190321T024717_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T024919_20190321T030534_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_IOPM_2_20190321T030747_20190321T032222_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_IOPM_2_20190321T032932_20190321T033141_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T033231_20190321T033643_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T033818_20190321T035354_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_IOPM_2_20190321T035554_20190321T040515_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_IOPM_2_20190321T043334_20190321T044308_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_IOPM_2_20190321T044959_20190321T050504_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_IOPM_2_20190321T050726_20190321T051544_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190321T051740_20190321T053439_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_IOPM_2_20190321T053712_20190321T053923_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\_IOPM\_2\_20190321T061642\_20190321T064354\_C001 CS OFFL SIR IOPM 2 20190321T064622 20190321T064822 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T064905\_20190321T065410\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T065650\_20190321T072223\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T075423\_20190321T080528\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T081107\_20190321T082239\_C001 CS OFFL SIR IOPM 2 20190321T082828 20190321T083429 C001 CS OFFL SIR IOPM 2 20190321T083600 20190321T090445 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T092729\_20190321T100212\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T100736\_20190321T101300\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T101428\_20190321T102053\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T105109\_20190321T105431\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T110709\_20190321T111538\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T111823\_20190321T114130\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T114632\_20190321T114739\_C001 CS OFFL SIR IOPM 2 20190321T114744 20190321T115152 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T115328\_20190321T120744\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T120842\_20190321T121210\_C001 CS OFFL SIR IOPM 2 20190321T124556 20190321T131927 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T132143\_20190321T132637\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T133737\_20190321T140853\_C001 CS OFFL SIR IOPM 2 20190321T142900 20190321T143616 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T144155\_20190321T145844\_C001 CS OFFL SIR IOPM 2 20190321T150022 20190321T150535 C001 CS OFFL SIR IOPM 2 20190321T150611 20190321T150745 C001 CS OFFL SIR IOPM 2 20190321T151538 20190321T152914 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T153128\_20190321T154303\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T161056\_20190321T162118\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T162258\_20190321T163752\_C001 CS OFFL SIR IOPM 2 20190321T163945 20190321T164446 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T164510\_20190321T164520\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T165757\_20190321T170628\_C001 CS OFFL SIR IOPM 2 20190321T171018 20190321T171505 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T175356\_20190321T181703\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T182018\_20190321T182402\_C001 CS OFFL SIR IOPM 2 20190321T182424 20190321T182715 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T183001\_20190321T185859\_C001 CS OFFL SIR IOPM 2 20190321T193043 20190321T195626 C001 CS OFFL SIR IOPM 2 20190321T195800 20190321T200316 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T200323\_20190321T200649\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T200918\_20190321T202117\_C001 CS OFFL SIR IOPM 2 20190321T202654 20190321T204324 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T210609\_20190321T212529\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T212950\_20190321T213624\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T213800\_20190321T214351\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T214840\_20190321T222248\_C001 CS OFFL SIR IOPM 2 20190321T225840 20190321T231553 C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T231730\_20190321T232242\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20190321T232802\_20190321T235053\_C001 CS OFFL SIR IOPN 2 20190321T100414 20190321T100736 C001 CS\_OFFL\_SIR\_IOPN\_2\_20190321T133026\_20190321T133155\_C001

SWH Averaging Status, Ocean 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 Ice Backscatter Averaging Status ecords The Ice Backscatter Averaging Status Flag has been set for one or more Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean 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 Ice Backscatter Averaging Status records The SWH and Ocean Averaging Status Flags have been set for one or SWH Averaging Status, Ocean Backscatter Averaging Status more records SWH Averaging Status, Ocean 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 Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records. SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean 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 Ice Backscatter Averaging Status records. The Ice Backscatter Averaging Status Flag has been set for one or more Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records The SWH and Ocean Averaging Status Flags have been set for one or SWH Averaging Status, Ocean Backscatter Averaging Status more records SWH Averaging Status, Ocean 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 Ice Backscatter Averaging Status records. SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean 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 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean Backscatter Averaging Status The SWH and Ocean Averaging Status Flags have been set for one or more records The Ice Backscatter Averaging Status Flag has been set for one or more Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean 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 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more Ice Backscatter Averaging Status records. SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records The SWH and Ocean Averaging Status Flags have been set for one or SWH Averaging Status, Ocean Backscatter Averaging Status more records. The Ice Backscatter Averaging Status Flag has been set for one or more Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records. SWH Averaging Status, Ocean 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 Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more records. SWH Averaging Status, Ocean 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 Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or Backscatter Averaging Status more record Ice Backscatter Averaging Status records

SWH Averaging Status, Ocean

Backscatter Averaging Status

The Ice Backscatter Averaging Status Flag has been set for one or more The SWH and Ocean Averaging Status Flags have been set for one or more records.

CS_OFFL_SIR_IOPN_2_20190321T145844_20190321T150022_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190321T082239_20190321T082425_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_IOPR_2_20190321T140854_20190321T140915_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_IOPR_2_20190321T155341_20190321T155536_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_IOPR_2_20190321T162118_20190321T162257_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 m	easurement record. The bit value of this flag ir	ndicates any problems when set.
Ocean Retracking Quality Flag: This flag is currently set for products over	r land and sea ice, but this is to be expected. 1	The number of products with this error flag set is given below.
Number of products with errors: 58		
6. IOP	L2 Pole-to-Pole Data Qual	ity 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 fil	e (.HDR) and a NetCDF product file (.nc).
Number of products with errors: 0		
6.2 P2P Product Header Analysis		
6.2 P2P Product Header Analysis	and SPH in order to identify any inconsistenci	es and/or errors raised by the ground-segment processing chain.
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 inconsistenci	es and/or errors raised by the ground-segment processing chain.
6.2 P2P Product Header Analysis For all products, a series of pre-defined checks are performed on the MPH Number of products with errors: 0	and SPH in order to identify any inconsistenci	es and/or errors raised by the ground-segment processing chain.
6.2 P2P Product Header Analysis For all products, a series of pre-defined checks are performed on the MPH Number of products with errors: 0 6.3 P2P Auxiliary Data File Usage Check		
6.2 P2P Product Header Analysis         For all products, a series of pre-defined checks are performed on the MPH         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		
6.2 P2P Product Header Analysis         For all products, a series of pre-defined checks are performed on the MPH         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		
6.2 P2P Product Header Analysis         For all products, a series of pre-defined checks are performed on the MPH         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		
6.2 P2P Product Header Analysis         For all products, a series of pre-defined checks are performed on the MPH         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         Number of products with errors:       0         6.4 P2P Auxiliary Correction Error Check	pre-determined baseline and also to check the	
6.2 P2P Product Header Analysis         For all products, a series of pre-defined checks are performed on the MPH         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         Number of products with errors:       0	pre-determined baseline and also to check the	
6.2 P2P Product Header Analysis         For all products, a series of pre-defined checks are performed on the MPH         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         Number of products with errors:       0         6.4 P2P Auxiliary Correction Error Check         For all products, the auxiliary corrections within the Geophysical Group are	pre-determined baseline and also to check the	
6.2 P2P Product Header Analysis         For all products, a series of pre-defined checks are performed on the MPH         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         Number of products with errors:       0         6.4 P2P Auxiliary Correction Error Check         For all products, the auxiliary corrections within the Geophysical Group are         Number of products with errors:       0	pre-determined baseline and also to check the checked for the default error value (32767).	e validity of Auxiliary Data Files is correct.
6.2 P2P Product Header Analysis         For all products, a series of pre-defined checks are performed on the MPH         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         Number of products with errors:       0         6.4 P2P Auxiliary Correction Error Check         For all products, the auxiliary corrections within the Geophysical Group are         Number of products with errors:       0         6.5 P2P Measurement Confidence Data Check	pre-determined baseline and also to check the checked for the default error value (32767).	e validity of Auxiliary Data Files is correct.
6.2 P2P Product Header Analysis         For all products, a series of pre-defined checks are performed on the MPH         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         Number of products with errors:       0         6.4 P2P Auxiliary Correction Error Check         For all products, the auxiliary corrections within the Geophysical Group are         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	pre-determined baseline and also to check the checked for the default error value (32767).	e validity of Auxiliary Data Files is correct.

# 6.6 P2P Range Measurement Check

CS\_OFFL\_SIR\_IOP\_2\_\_20190321T223217\_20190321T232156\_C001

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.

There is an error in the scaling of the L2 waveform for one or more records

Power scaling error

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. 29

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220190321T001246_20190321T010220_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T010220_20190321T015159_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T015159_20190321T024134_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_IOP_220190321T024134_20190321T033113_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_IOP_220190321T033113_20190321T042048_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T042048_20190321T051026_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T051026_20190321T060001_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_IOP_220190321T060001_20190321T064940_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T064940_20190321T073915_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_IOP_220190321T073915_20190321T082854_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T082854_20190321T091828_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_IOP_220190321T091828_20190321T100807_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T100807_20190321T105742_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_IOP_220190321T105742_20190321T114721_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T114721_20190321T123656_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_IOP_220190321T123656_20190321T132634_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_IOP_220190321T132634_20190321T141609_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_IOP_220190321T141609_20190321T150548_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_IOP_220190321T150548_20190321T155523_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T155523_20190321T164501_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_IOP_220190321T164501_20190321T173436_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T173436_20190321T182415_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_IOP_220190321T182415_20190321T191350_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T191350_20190321T200329_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_IOP_220190321T200329_20190321T205303_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_IOP_220190321T205303_20190321T214242_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_IOP_220190321T214242_20190321T223217_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_IOP_220190321T223217_20190321T232156_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_IOP_2_20190321T232156_20190322T001131_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. 29

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220190321T001246_20190321T010220_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_IOP_220190321T010220_20190321T015159_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_IOP_220190321T015159_20190321T024134_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_IOP_220190321T024134_20190321T033113_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_IOP_220190321T033113_20190321T042048_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_IOP_220190321T042048_20190321T051026_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_IOP_220190321T051026_20190321T060001_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_IOP_220190321T060001_20190321T064940_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_IOP_220190321T064940_20190321T073915_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_IOP_220190321T073915_20190321T082854_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_IOP_220190321T082854_20190321T091828_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_IOP_220190321T091828_20190321T100807_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_IOP_220190321T100807_20190321T105742_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_IOP_220190321T105742_20190321T114721_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_IOP_220190321T114721_20190321T123656_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_IOP_220190321T123656_20190321T132634_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_IOP_220190321T132634_20190321T141609_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_IOP_220190321T141609_20190321T150548_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_IOP_220190321T150548_20190321T155523_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_IOP_220190321T155523_20190321T164501_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_IOP_220190321T164501_20190321T173436_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_IOP_220190321T173436_20190321T182415_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_IOP_220190321T182415_20190321T191350_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_IOP_220190321T191350_20190321T200329_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_IOP_220190321T200329_20190321T205303_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_IOP_2_20190321T205303_20190321T214242_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_IOP_2_20190321T214242_20190321T223217_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_IOP_220190321T223217_20190321T232156_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_IOP_220190321T232156_20190322T001131_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ice Backscatter Averaging Status	The SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.

# 6.8 P2P Ocean Retracking Quality Check

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

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

Number of products with errors:	26

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220190321T001246_20190321T010220_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T010220_20190321T015159_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T015159_20190321T024134_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T024134_20190321T033113_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T033113_20190321T042048_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T042048_20190321T051026_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T060001_20190321T064940_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T064940_20190321T073915_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T073915_20190321T082854_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T082854_20190321T091828_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T091828_20190321T100807_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T100807_20190321T105742_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T105742_20190321T114721_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T114721_20190321T123656_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T123656_20190321T132634_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T132634_20190321T141609_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T141609_20190321T150548_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T150548_20190321T155523_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T155523_20190321T164501_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T164501_20190321T173436_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T173436_20190321T182415_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T182415_20190321T191350_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T191350_20190321T200329_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T205303_20190321T214242_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T214242_20190321T223217_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220190321T223217_20190321T232156_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
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