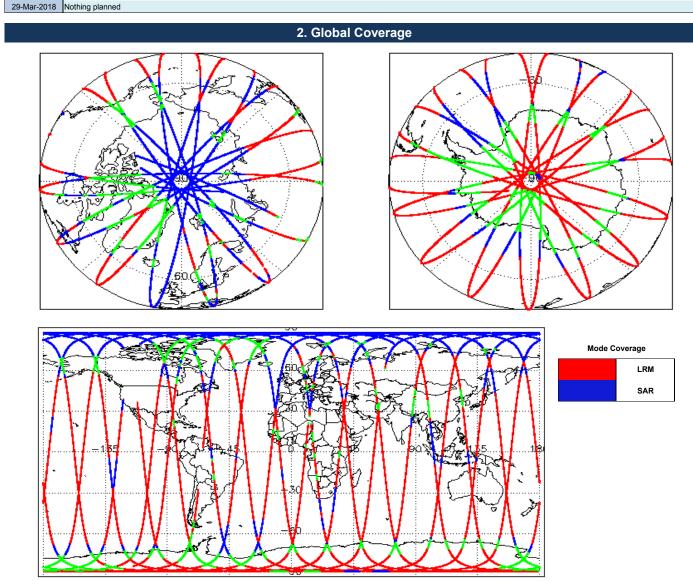


# **IDEAS+ Daily Report for IOP data:**

# 28/03/2018

1. Overview				
	02 4== 2010	Check	L1 & L2	P2P
Report Production:	03-Apr-2018	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used: CryoSat Ocean Processor	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal	
	Product Software Check	Nominal	Nominal	
Data Used:	Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data	Product Format Check	Nominal	Nominal
		Product Header Analysis	See Section 5.2	Nominal
		Auxiliary Data File Usage Check	Nominal	Nominal
		Auxiliary Correction Error Check	Nominal	Nominal
		Measurement Confidence Data Check	See Section 4.6	Nominal
		Range, SWH & Backscatter Measurement Check	See Section 5.6, 5.7	See Section 6.6, 6.7
		Ocean Retracking Quality Check	See Section 5.8	See Section 6.8

#### Mission / Instrument News 27-Mar-2018 None 28-Mar-2018 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 pr	e-determined baseline and also to	o check the validity of Auxiliary Data Files is correct.		
Number of products with errors: 0				
4.4 L1B Auxiliary Correction Error Check				
CryoSat L1B data includes a correction error flag for each measurement reco	rd. The bit value of this flag indica	tes any problems when set.		
Number of products with errors: 0				
4.5 L1B Measurement Confidence Data Check				
CryoSat L1B data includes a measurement confidence flag for each measure	ment record. The bit value of this	flag indicates any problems when set.		
Attitude Correction Missing: This flag is currently set in error for IOPR prod	ucts 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				
Loss of Echo Flag: This flag is currently set for products over land, but this is	-	es any problems when set.		
Loss of Echo Flag: This flag is currently set for products over land, but this is Number of products with errors: 15	to be expected.			
Loss of Echo Flag: This flag is currently set for products over land, but this is Number of products with errors: 15 Product	to be expected.	Description		
Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product         CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001	to be expected.			
Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product         CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001         CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T005845_C001	to be expected. Test Failed Loss of Echo	Description The tracking echo is missing for one or more records		
Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product       15         CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001         CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T005845_C001         CS_OFFL_SIR_IOPN1B_20180328T023701_20180328T023829_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		
Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         15           Product         15           CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001         15           CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T005845_C001         15           CS_OFFL_SIR_IOPN1B_20180328T023701_20180328T023829_C001         15           CS_OFFL_SIR_IOPN1B_20180328T023701_20180328T023829_C001         15           CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T045309_C001         15	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		
Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         15           Product         15           CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001         16           CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T005845_C001         17           CS_OFFL_SIR_IOPN1B_20180328T023701_20180328T023829_C001         15           CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T045309_C001         16           CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T045309_C001         16           CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T045327_C001         17	to be expected.           Test Failed           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 Flag: This flag is currently set for products over land, but this is           Number of products with errors:         15           Product         15           CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001         CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T005845_C001           CS_OFFL_SIR_IOPN1B_20180328T023701_20180328T023829_C001         CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T045309_C001           CS_OFFL_SIR_IOPN1B_20180328T081103_20180328T081237_C001         CS_OFFL_SIR_IOPN1B_20180328T04907_20180328T0812358_C001	to be expected.           Test Failed           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           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records		
Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         15           Product         15           CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001         15           CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T005845_C001         15           CS_OFFL_SIR_IOPN1B_20180328T023701_20180328T023829_C001         15           CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T045309_C001         15           CS_OFFL_SIR_IOPN1B_20180328T081103_20180328T081237_C001         15           CS_OFFL_SIR_IOPN1B_20180328T104907_20180328T105358_C001         15           CS_OFFL_SIR_IOPN1B_20180328T190421_20180328T190945_C001         15	to be expected.           Test Failed           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           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 Flag: This flag is currently set for products over land, but this is           Number of products with errors:         15           Product         15           CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001         CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T005845_C001           CS_OFFL_SIR_IOPN1B_20180328T023701_20180328T023829_C001         CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T045309_C001           CS_OFFL_SIR_IOPN1B_20180328T081103_20180328T081237_C001         CS_OFFL_SIR_IOPN1B_20180328T104907_20180328T105358_C001           CS_OFFL_SIR_IOPN1B_20180328T190421_20180328T190945_C001         CS_OFFL_SIR_IOPN1B_20180328T190421_20180328T13524_C001	to be expected.           Test Failed           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           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		
Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         15           Product         15           CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001         CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T005845_C001           CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T023829_C001         CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T045309_C001           CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T081237_C001         CS_OFFL_SIR_IOPN1B_20180328T04907_20180328T105358_C001           CS_OFFL_SIR_IOPN1B_20180328T104907_20180328T190945_C001         CS_OFFL_SIR_IOPN1B_20180328T190421_20180328T213524_C001           CS_OFFL_SIR_IOPN1B_20180328T213651_20180328T213913_C001         CS_OFFL_SIR_IOPN1B_20180328T213651_20180328T213913_C001	to be expected.	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           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           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records		
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           Number of products with errors:         15           Product         15           CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001         CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T005845_C001           CS_OFFL_SIR_IOPN1B_20180328T023701_20180328T023829_C001         CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T045309_C001           CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T081237_C001         CS_OFFL_SIR_IOPN1B_20180328T04907_20180328T105358_C001           CS_OFFL_SIR_IOPN1B_20180328T104907_20180328T105358_C001         CS_OFFL_SIR_IOPN1B_20180328T130421_20180328T130545_C001           CS_OFFL_SIR_IOPN1B_20180328T213641_20180328T213524_C001         CS_OFFL_SIR_IOPN1B_20180328T213651_20180328T213913_C001           CS_OFFL_SIR_IOPN1B_20180328T013736_20180328T213913_C001         CS_OFFL_SIR_IOPN1B_20180328T013736_20180328T013910_C001	to be expected.	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           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           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 Flag: This flag is currently set for products over land, but this is           Number of products with errors:         15           Product         15           CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001         CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T005845_C001           CS_OFFL_SIR_IOPN1B_20180328T0023701_20180328T023829_C001         CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T045309_C001           CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T081237_C001         CS_OFFL_SIR_IOPN1B_20180328T04907_20180328T105358_C001           CS_OFFL_SIR_IOPN1B_20180328T190421_20180328T190945_C001         CS_OFFL_SIR_IOPN1B_20180328T190421_20180328T213524_C001           CS_OFFL_SIR_IOPN1B_20180328T213651_20180328T213913_C001         CS_OFFL_SIR_IOPN1B_20180328T213651_20180328T213913_C001	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           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           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           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records		
Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         15           Product         15           CS_OFFL_SIR_IOPN1B_20180328T000426_20180328T000916_C001         CS_OFFL_SIR_IOPN1B_20180328T005629_20180328T005845_C001           CS_OFFL_SIR_IOPN1B_20180328T023701_20180328T023829_C001         CS_OFFL_SIR_IOPN1B_20180328T045142_20180328T045309_C001           CS_OFFL_SIR_IOPN1B_20180328T081103_20180328T081237_C001         CS_OFFL_SIR_IOPN1B_20180328T04104907_20180328T045358_C001           CS_OFFL_SIR_IOPN1B_20180328T104907_20180328T105358_C001         CS_OFFL_SIR_IOPN1B_20180328T139421_20180328T190945_C001           CS_OFFL_SIR_IOPN1B_20180328T213413_20180328T213524_C001         CS_OFFL_SIR_IOPN1B_20180328T213651_20180328T213913_C001           CS_OFFL_SIR_IOPN1B_20180328T013736_20180328T013910_C001         CS_OFFL_SIR_IOPR1B_20180328T013736_20180328T013910_C001	to be expected.	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           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           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           The tracking echo is missing for one or more records		

## 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

### 5.1 L2 Product Format Check

CS\_OFFL\_SIR\_IOPR1B\_20180328T141058\_20180328T141207\_C001

CS\_OFFL\_SIR\_IOPR1B\_20180328T194049\_20180328T194527\_C001

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: 2

Loss of Echo

Loss of Echo

Product	Test Failed
CS_OFFL_SIR_IOPR_2_20180328T180758_20180328T180818_C001	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OFFL_SIR_IOPR_2_20180328T150822_20180328T150829_C001	Percentage of processing errors detected greater than minimum acceptable threshold.

#### 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).

0

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 CS\_OFFL\_SIR\_IOPM\_2\_20180328T002141\_20180328T004640\_C001 CS OFFL SIR IOPM 2 20180328T005148 20180328T005629 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T005922\_20180328T012553\_C001 CS OFFL SIR IOPM 2 20180328T015812 20180328T020806 C001 CS OFFL SIR IOPM 2 20180328T021344 20180328T022545 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T023106\_20180328T023701\_C001 CS OFFL SIR IOPM\_2\_20180328T023829\_20180328T030315\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T031554\_20180328T031701\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T032939\_20180328T040444\_C001 CS OFFL SIR IOPM 2 20180328T041013 20180328T041532 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T041704\_20180328T042011\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T042211\_20180328T042345\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T045309\_20180328T045544\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T045632\_20180328T045709\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T050941\_20180328T051814\_C001 CS OFFL SIR IOPM 2 20180328T052100 20180328T054403 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T054900\_20180328T055015\_C001 CS OFFL SIR IOPM 2 20180328T055023 20180328T055429 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T055603\_20180328T060936\_C001 CS OFFL SIR IOPM 2 20180328T061124 20180328T061735 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T061916\_20180328T062358\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T064842\_20180328T072204\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T072933\_20180328T073229\_C001 CS OFFL SIR IOPM 2 20180328T073521 20180328T073715 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T074014\_20180328T081039\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T083042\_20180328T084443\_C001 CS OFFL SIR IOPM 2 20180328T084534 20180328T090123 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T090305\_20180328T090811\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T091745\_20180328T092750\_C001 CS OFFL SIR IOPM 2 20180328T093410 20180328T094537 C001 CS OFFL SIR IOPM 2 20180328T100755 20180328T102355 C001 CS OFFL SIR IOPM 2 20180328T102535 20180328T104021 C001 CS OFFL SIR IOPM 2 20180328T104221 20180328T104721 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T104803\_20180328T104907\_C001 CS OFFL SIR IOPM 2 20180328T105429 20180328T111747 C001 CS OFFL SIR IOPM 2 20180328T111909 20180328T112736 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T115649\_20180328T121952\_C001 CS OFFL SIR IOPM 2 20180328T122303 20180328T122638 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T122645\_20180328T122654\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T123242\_20180328T130105\_C001 CS OFFL SIR IOPM 2 20180328T133240 20180328T135911 C001 CS OFFL SIR IOPM 2 20180328T140045 20180328T140552 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T140559\_20180328T140926\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T141207\_20180328T142359\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T142937\_20180328T144649\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T153233\_20180328T153905\_C001 CS OFFL SIR IOPM 2 20180328T154044 20180328T154624 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T154718\_20180328T154826\_C001 CS OFFL SIR IOPM 2 20180328T155129 20180328T162534 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T163922\_20180328T164017\_C001 CS OFFL SIR IOPM 2 20180328T165854 20180328T171834 C001

Test Failed 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 Ocean Range Averaging Status Ice 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 Ocean 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 Ice 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 Ocean Range Averaging Status Ice Range Averaging Status Ice Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status Ocean Range Averaging Status

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CS_OFFL_SIR_IOPM_2_20180328T172008_20180328T172518_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T173036_20180328T180516_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T182953_20180328T183425_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T183509_20180328T185244_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T185539_20180328T185725_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T191120_20180328T194049_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T200020_20180328T201840_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T201934_20180328T203303_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T204450_20180328T204832_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T205012_20180328T210553_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T210755_20180328T211717_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T213525_20180328T213651_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T214122_20180328T214136_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T214501_20180328T215634_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T221241_20180328T221357_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T221947_20180328T222733_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T222922_20180328T224457_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T232253_20180328T235541_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPN_2_20180328T013910_20180328T013933_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPN_2_20180328T090123_20180328T090305_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPN_2_20180328T144905_20180328T145028_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPN_2_20180328T145806_20180328T145831_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPN_2_20180328T162752_20180328T162829_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPN_2_20180328T203855_20180328T204131_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180327T235754_20180328T000426_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180328T042012_20180328T042210_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180328T045016_20180328T045142_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180328T045710_20180328T050604_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180328T055015_20180328T055022_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180328T090811_20180328T090817_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180328T115548_20180328T115648_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180328T203303_20180328T203855_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. 85

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20180328T002141_20180328T004640_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_20180328T005148_20180328T005629_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T005922_20180328T012553_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_20180328T015812_20180328T020806_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_20180328T021344_20180328T022545_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_20180328T023106_20180328T023701_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T023829_20180328T030315_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_20180328T031554_20180328T031701_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_20180328T032939_20180328T040444_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_20180328T041013_20180328T041532_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T041704_20180328T042011_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\_20180328T042211\_20180328T042345\_C001 CS OFFL SIR IOPM 2 20180328T045309 20180328T045544 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T045632\_20180328T045709\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T050941\_20180328T051814\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T052100\_20180328T054403\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T054900\_20180328T055015\_C001 CS OFFL SIR IOPM 2 20180328T055023 20180328T055429 C001 CS OFFL SIR IOPM 2 20180328T055603 20180328T060936 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T061124\_20180328T061735\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T061916\_20180328T062358\_C001 CS OFFL SIR IOPM 2 20180328T064842 20180328T072204 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T072403\_20180328T072913\_C001 CS OFFL SIR IOPM 2 20180328T072933 20180328T073229 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T073521\_20180328T073715\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T074014\_20180328T081039\_C001 CS OFFL SIR IOPM 2 20180328T081237 20180328T081607 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T083042\_20180328T084443\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T084534\_20180328T090123\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T090305\_20180328T090811\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T091745\_20180328T092750\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T093410\_20180328T094537\_C001 CS OFFL SIR IOPM 2 20180328T100755 20180328T102355 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T102535\_20180328T104021\_C001 CS OFFL SIR IOPM 2 20180328T104221 20180328T104721 C001 CS OFFL SIR IOPM 2 20180328T104803 20180328T104907 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T105429\_20180328T111747\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T111909\_20180328T112736\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T115649\_20180328T121952\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T122303\_20180328T122638\_C001 CS OFFL SIR IOPM 2 20180328T122700 20180328T123016 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T123242\_20180328T130105\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T133240\_20180328T135911\_C001 CS OFFL SIR IOPM 2 20180328T140045 20180328T140552 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T140559\_20180328T140926\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T141207\_20180328T142359\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T142937\_20180328T144649\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T153233\_20180328T153905\_C001 CS OFFL SIR IOPM 2 20180328T154044 20180328T154624 C001 CS OFFL SIR IOPM 2 20180328T155129 20180328T162534 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T163922\_20180328T164017\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T165854\_20180328T171834\_C001 CS OFFL SIR IOPM 2 20180328T172008 20180328T172518 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T173036\_20180328T180516\_C001 CS OFFL SIR IOPM 2 20180328T181927 20180328T181939 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T182953\_20180328T183425\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T183509\_20180328T185244\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T185539\_20180328T185725\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T191120\_20180328T194049\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T200020\_20180328T201840\_C001 CS OFFL SIR IOPM 2 20180328T201934 20180328T203303 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180328T204450\_20180328T204832\_C001 SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status records Ice Backscatter Averaging Status records SWH Averaging Status, Ocean Backscatter Averaging Status more records SWH Averaging Status, Ocean Backscatter Averaging Status more records. SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status records Ice Backscatter Averaging Status records SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status Ice Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status Ice Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status Ice Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status

Ice Backscatter Averaging Status

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

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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 records.

The Ice Backscatter Averaging Status Flag has been set for one or more records.

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

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

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 records.

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

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

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 records.

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

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

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

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

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

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

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

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 records.

CS OFFL SIR IOPM 2 20180328T205012 20180328T210553 C001	SWH Averaging Status, Ocean	The SWH and Ocean Averaging Status Flags have been set for one or
	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_IOPM_2_20180328T210755_20180328T211717_C001	Backscatter Averaging Status	more records.
CS_OFFL_SIR_IOPM_2_20180328T213525_20180328T213651_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T214122_20180328T214136_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_20180328T214501_20180328T215634_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_20180328T221241_20180328T221357_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_20180328T221947_20180328T222733_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180328T222922_20180328T224457_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_20180328T232253_20180328T235541_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_IOPN_2_20180328T013910_20180328T013933_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_IOPN_2_20180328T090123_20180328T090305_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPN_2_20180328T144905_20180328T145028_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_IOPN_2_20180328T145806_20180328T145831_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_IOPN_2_20180328T162752_20180328T162829_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_IOPN_2_20180328T203855_20180328T204131_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180327T235754_20180328T000426_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_20180328T042012_20180328T042210_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_20180328T045016_20180328T045142_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_20180328T045710_20180328T050604_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_20180328T055015_20180328T055022_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180328T090811_20180328T090817_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180328T115548_20180328T115648_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_20180328T203303_20180328T203855_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: 58

## 6. IOP L2 Pole-to-Pole Data Quality Check

#### 6.1 P2P Product Format Check

Each product, retrieved and unpacked from the science	e server, is checked to ensure it consists of both an XML header file (.HDR) and a NetCDF product file (.nc).
Number of products with errors:	0

#### 6.2 P2P Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. Number of products with errors:

## 6.3 P2P Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct. Number of products with errors: 0

# 6.4 P2P Auxiliary Correction Error Check

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

Number of products with errors:

### 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.

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

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

Ice Range Averaging Status Flag: This flag is currently set for products over land, but this is to be expected. 29

Number of	products with errors:	
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Product	Test Failed	Description
CS_OFFL_SIR_IOP_220180328T000247_20180328T005223_C002	Ocean Rande Averading Status	The Ocean Range Averaging Status Flag has been set for one or more records.
		The Ocean and Ice Range Averaging Status Flags have been set for one or more records.

CS_OFFL_SIR_IOP_220180328T014201_20180328T023137_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T023137_20180328T032114_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_220180328T032114_20180328T041051_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T041051_20180328T050028_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_220180328T050028_20180328T055004_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T055004_20180328T063941_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_220180328T063941_20180328T072918_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_220180328T072918_20180328T081855_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_220180328T081855_20180328T090831_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_220180328T090831_20180328T095808_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T095808_20180328T104745_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_220180328T104745_20180328T113722_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_220180328T113722_20180328T122658_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_220180328T122658_20180328T131635_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_220180328T131635_20180328T140612_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_220180328T140612_20180328T145549_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T145549_20180328T154526_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T154526_20180328T163503_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_220180328T163503_20180328T172439_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_220180328T172439_20180328T181416_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_220180328T181416_20180328T190353_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T190353_20180328T195330_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T195330_20180328T204306_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_220180328T204306_20180328T213243_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_220180328T213243_20180328T222220_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_220180328T222220_20180328T231157_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T231157_20180329T000133_C001	Ocean Range Averaging Status, Ice Range Averaging Status	The Ocean and Ice Range Averaging Status Flags have been set for one or more records.

#### 6.7 P2P SWH and Backscatter Measurement Check

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

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

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

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

Ice Backscatter Averaging Status Flag: This flag is currently set for products over land, but this is to be expected. 29

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220180328T000247_20180328T005223_C002	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_220180328T005223_20180328T014201_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_220180328T014201_20180328T023137_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_220180328T023137_20180328T032114_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_220180328T032114_20180328T041051_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_220180328T041051_20180328T050028_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_220180328T050028_20180328T055004_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_220180328T055004_20180328T063941_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_220180328T063941_20180328T072918_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_220180328T072918_20180328T081855_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_220180328T081855_20180328T090831_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_220180328T090831_20180328T095808_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_220180328T095808_20180328T104745_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_220180328T104745_20180328T113722_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_220180328T113722_20180328T122658_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_220180328T122658_20180328T131635_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_220180328T131635_20180328T140612_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_220180328T140612_20180328T145549_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_220180328T145549_20180328T154526_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_220180328T154526_20180328T163503_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_220180328T163503_20180328T172439_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_220180328T172439_20180328T181416_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_220180328T181416_20180328T190353_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_220180328T190353_20180328T195330_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_220180328T195330_20180328T204306_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_220180328T204306_20180328T213243_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_220180328T213243_20180328T222220_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_220180328T222220_20180328T231157_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_220180328T231157_20180329T000133_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

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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:

Test Failed	Description
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
	Ocean Retracking Quality Flag Ocean Retracking Quality Flag

CS_OFFL_SIR_IOP_220180328T190353_20180328T195330_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T195330_20180328T204306_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T204306_20180328T213243_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T213243_20180328T222220_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T222220_20180328T231157_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180328T231157_20180329T000133_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.