

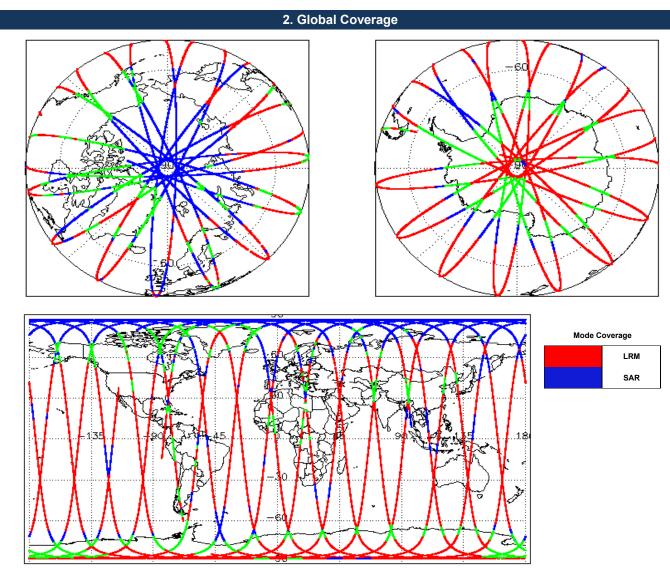
# IDEAS+ Daily Report for IOP data:

# 12/03/2018

1. Overview				
Demont Dreductions	45 Mar 2010	Check	L1 & L2	P2P
Report Production:	15-Mar-2018	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	Crue Cat Oscar Drassas	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Usea:	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal
Data Used:	Intermediate Ocean Products (IOP)	Product Format Check	Nominal	Nominal
Data Used:	L1B, L2 & P2P Science Data	Product Header Analysis	Nominal	Nominal
1		Auxiliary Data File Usage Check	Nominal	Nominal
		Auxiliary Correction Error Check	Nominal	Nominal
		Measurement Confidence Data Check	See Section 4.5, 4.6	Nominal
		Range, SWH & Backscatter Measurement Check	See Section 5.6, 5.7	See Section 6.6, 6.7
		Ocean Retracking Quality Check	See Section 5.8	See Section 6.8

### Mission / Instrument News 11-Mar-2018 None 12-Mar-2018 None anned

13-Mar-2018	Nothing pla
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# 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 pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.				
Number of products with errors: 0				
4.4 L1B Auxiliary Correction Error Check				
CryoSat L1B data includes a correction error flag for each measurement record. The bit value of this flag indicates any problems when set.				
Number of products with errors: 0				
4.5 L1B Measurement Confidence Data Check				
CryoSat L1B data includes a measurement confidence flag for each measure	ment record. The bit value of this f	ag indicates any problems when set.		
Attitude Correction Missing: This flag is currently set in error for IOPR prod	ucts due to a configuration issue. 1	his 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				
4.6 L1B Waveform Group Data Check				
· · · · · · · · · · · · · · · · · · ·	d. The bit value of this flag indicate	es any problems when set.		
CryoSat L1B data includes a waveform data flag for each measurement recor	C C	es any problems when set.		
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	C C	es any problems when set.		
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: 13	C C	es any problems when set. Description		
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: 13 Product	s to be expected.			
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: 13 Product CS_OFFL_SIR_IOPM1B_20180312T011905_20180312T014426_C001	s to be expected.	Description		
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: 13 Product CS_OFFL_SIR_IOPM1B_20180312T011905_20180312T014426_C001 CS_OFFL_SIR_IOPM1B_20180312T090309_20180312T090426_C001	s to be expected. Test Failed Loss of Echo	Description 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: 13 Product CS_OFFL_SIR_IOPM1B_20180312T011905_20180312T014426_C001 CS_OFFL_SIR_IOPM1B_20180312T090309_20180312T090426_C001 CS_OFFL_SIR_IOPN1B_20180312T015719_20180312T015746_C001	s 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		
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: 13 Product CS_OFFL_SIR_IOPM1B_20180312T011905_20180312T014426_C001 CS_OFFL_SIR_IOPM1B_20180312T090309_20180312T090426_C001 CS_OFFL_SIR_IOPN1B_20180312T015719_20180312T015746_C001 CS_OFFL_SIR_IOPN1B_20180312T151730_20180312T151807_C001	s 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		
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: 13 Product CS_OFFL_SIR_IOPM1B_20180312T011905_20180312T014426_C001 CS_OFFL_SIR_IOPM1B_20180312T090309_20180312T090426_C001 CS_OFFL_SIR_IOPM1B_20180312T015719_20180312T015746_C001 CS_OFFL_SIR_IOPN1B_20180312T151730_20180312T151807_C001 CS_OFFL_SIR_IOPN1B_20180312T160806_20180312T160918_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		
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:         13           Product         13           CS_OFFL_SIR_IOPM1B_20180312T011905_20180312T014426_C001         CS_OFFL_SIR_IOPM1B_20180312T090309_20180312T090426_C001           CS_OFFL_SIR_IOPM1B_20180312T015719_20180312T015746_C001         CS_OFFL_SIR_IOPN1B_20180312T151730_20180312T151807_C001           CS_OFFL_SIR_IOPN1B_20180312T160806_20180312T160918_C001         CS_OFFL_SIR_IOPN1B_20180312T160806_20180312T160918_C001           CS_OFFL_SIR_IOPN1B_20180312T201503_20180312T0160918_C001         CS_OFFL_SIR_IOPN1B_20180312T201503_20180312T160918_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		
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:         13           Product         13           CS_OFFL_SIR_IOPM1B_20180312T011905_20180312T014426_C001         CS_OFFL_SIR_IOPM1B_20180312T090309_20180312T090426_C001           CS_OFFL_SIR_IOPM1B_20180312T015719_20180312T015746_C001         CS_OFFL_SIR_IOPN1B_20180312T151730_20180312T151807_C001           CS_OFFL_SIR_IOPN1B_20180312T160806_20180312T160918_C001         CS_OFFL_SIR_IOPN1B_20180312T201503_20180312T201841_C001           CS_OFFL_SIR_IOPN1B_20180312T201928_20180312T2003_C001         CS_OFFL_SIR_IOPN1B_20180312T201928_20180312T202003_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		
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:         13           Product         13           CS_OFFL_SIR_IOPM1B_20180312T011905_20180312T014426_C001         CS_OFFL_SIR_IOPM1B_20180312T090309_20180312T090426_C001           CS_OFFL_SIR_IOPM1B_20180312T015719_20180312T015746_C001         CS_OFFL_SIR_IOPN1B_20180312T151730_20180312T151807_C001           CS_OFFL_SIR_IOPN1B_20180312T160806_20180312T160918_C001         CS_OFFL_SIR_IOPN1B_20180312T201503_20180312T201841_C001           CS_OFFL_SIR_IOPN1B_20180312T201928_20180312T202003_C001         CS_OFFL_SIR_IOPN1B_20180312T201928_20180312T202003_C001           CS_OFFL_SIR_IOPN1B_20180312T201928_20180312T202003_C001         CS_OFFL_SIR_IOPN1B_20180312T201928_20180312T202003_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		
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           Number of products with errors:         13           Product         13           CS_OFFL_SIR_IOPM1B_20180312T011905_20180312T014426_C001         CS_OFFL_SIR_IOPM1B_20180312T090309_20180312T090426_C001           CS_OFFL_SIR_IOPN1B_20180312T015719_20180312T015746_C001         CS_OFFL_SIR_IOPN1B_20180312T160719_20180312T160918_C001           CS_OFFL_SIR_IOPN1B_20180312T160806_20180312T160918_C001         CS_OFFL_SIR_IOPN1B_20180312T201503_20180312T201841_C001           CS_OFFL_SIR_IOPN1B_20180312T201928_20180312T200203_C001         CS_OFFL_SIR_IOPN1B_20180312T201928_20180312T20928_C001           CS_OFFL_SIR_IOPN1B_20180312T20180312T20180312T203527_C001         CS_OFFL_SIR_IOPN1B_20180312T2033317_20180312T23527_C001	s 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           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

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:

Loss of Echo

Loss of Echo

CS\_OFFL\_SIR\_IOPR1B\_20180312T093200\_20180312T093813\_C001

CS\_OFFL\_SIR\_IOPR1B\_20180312T100543\_20180312T101008\_C001

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

# 5.4 L2 Auxiliary Correction Error Check

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

Number of products with errors:

# 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

# 5.6 L2 Range Measurement Check

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

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

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

Ice Range Averaging Status Flag: This flag is currently set for products over land, but this is to be expected. 75

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20180312T003843_20180312T004247_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T004250_20180312T010558_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T011110_20180312T011635_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T011905_20180312T014426_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.

CS\_OFFL\_SIR\_IOPM\_2\_20180312T021619\_20180312T022739\_C001 CS OFFL SIR IOPM 2 20180312T023316 20180312T024449 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T025804\_20180312T033023\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T033452\_20180312T033608\_C001 CS OFFL SIR IOPM 2 20180312T035003 20180312T042417 C001 CS OFFL SIR IOPM 2 20180312T042947 20180312T043516 C001 CS OFFL SIR IOPM 2 20180312T043643 20180312T044306 C001 CS OFFL SIR IOPM 2 20180312T051406 20180312T051620 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T052929\_20180312T053943\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T054036\_20180312T060342\_C001 CS OFFL SIR IOPM 2 20180312T060954 20180312T061403 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T061542\_20180312T063544\_C001 CS OFFL SIR IOPM 2 20180312T070753 20180312T074127 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T074422\_20180312T074849\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T075503\_20180312T075913\_C001 CS OFFL SIR IOPM 2 20180312T075952 20180312T083119 C001 CS OFFL SIR IOPM 2 20180312T083247 20180312T083538 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T085117\_20180312T085828\_C001 CS OFFL SIR IOPM 2 20180312T090429 20180312T092052 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T092230\_20180312T092747\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T092821\_20180312T093001\_C001 CS OFFL SIR IOPM 2 20180312T093813 20180312T095112 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T095342\_20180312T100543\_C001 CS OFFL SIR IOPM 2 20180312T104508 20180312T110005 C001 CS OFFL SIR IOPM 2 20180312T110156 20180312T110658 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T110705\_20180312T110716\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T111531\_20180312T111630\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T112222\_20180312T112748\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T113230\_20180312T113720\_C001 CS OFFL SIR IOPM 2 20180312T113843 20180312T114553 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T121730\_20180312T123913\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T124217\_20180312T124614\_C001 CS OFFL SIR IOPM 2 20180312T124636 20180312T124855 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T125211\_20180312T132112\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T135310\_20180312T141845\_C001 CS OFFL SIR IOPM 2 20180312T142004 20180312T142528 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T143114\_20180312T144330\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T144908\_20180312T150508\_C001 CS OFFL SIR IOPM 2 20180312T152925 20180312T154902 C001 CS OFFL SIR IOPM 2 20180312T155155 20180312T155830 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T160005\_20180312T160806\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T161047\_20180312T164520\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T165843\_20180312T165943\_C001 CS OFFL SIR IOPM 2 20180312T172024 20180312T173759 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T173939\_20180312T174454\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T175015\_20180312T181309\_C001 CS OFFL SIR IOPM 2 20180312T181555 20180312T182522 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T183707\_20180312T183750\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T183833\_20180312T184135\_C001 CS OFFL SIR IOPM 2 20180312T185600 20180312T190200 C001 CS OFFL SIR IOPM 2 20180312T190347 20180312T191705 C001

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 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 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 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 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

The Ocean Range Averaging Status Flag has been set for one or more record 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 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 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 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 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 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 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 ecords 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 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 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 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 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

CS_OFFL_SIR_IOPM_2_20180312T192111_20180312T192355_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more
	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T202003_20180312T202659_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T202717_20180312T205131_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T210107_20180312T210302_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T210933_20180312T213837_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T215502_20180312T215852_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T220020_20180312T220215_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T220406_20180312T221608_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T222933_20180312T223329_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T223944_20180312T224220_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T224241_20180312T224708_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T224848_20180312T230355_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T230535_20180312T230817_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T235057_20180313T001517_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180312T084639_20180312T085116_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180312T121552_20180312T121730_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180312T174759_20180312T175015_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180312T191705_20180312T191803_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20180312T210928_20180312T210933_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. 80

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20180312T004250_20180312T010558_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_20180312T011110_20180312T011635_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T011905_20180312T014426_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_20180312T021619_20180312T022739_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_20180312T023316_20180312T024449_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_20180312T025038_20180312T025640_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T025804_20180312T033023_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_20180312T033452_20180312T033608_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_20180312T035003_20180312T042417_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_20180312T042947_20180312T043516_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T043643_20180312T044306_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_20180312T051406_20180312T051620_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_20180312T052929_20180312T053943_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_20180312T054036_20180312T060342_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_20180312T060848_20180312T060952_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T060954_20180312T061403_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T061542_20180312T063544_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_20180312T070753_20180312T074127_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_20180312T074422_20180312T074849_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T074908_20180312T075301_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20180312T075503_20180312T075913_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_20180312T075952_20180312T083119_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_20180312T083247_20180312T083538_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.

CS\_OFFL\_SIR\_IOPM\_2\_20180312T085117\_20180312T085828\_C001 CS OFFL SIR IOPM 2 20180312T090309 20180312T090426 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T090429\_20180312T092052\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T092230\_20180312T092747\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T092821\_20180312T093001\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T093813\_20180312T095112\_C001 CS OFFL SIR IOPM 2 20180312T095342 20180312T100543 C001 CS OFFL SIR IOPM 2 20180312T104508 20180312T110005 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T110156\_20180312T110658\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T110705\_20180312T110716\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T111531\_20180312T111630\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T112222\_20180312T112748\_C001 CS OFFL SIR IOPM 2 20180312T113230 20180312T113720 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T113843\_20180312T114553\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T121730\_20180312T123913\_C001 CS OFFL SIR IOPM 2 20180312T124217 20180312T124614 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T124636\_20180312T124855\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T125211\_20180312T132112\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T135310\_20180312T141845\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T142004\_20180312T142528\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T142535\_20180312T142900\_C001 CS OFFL SIR IOPM 2 20180312T143114 20180312T144330 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T144908\_20180312T150508\_C001 CS OFFL SIR IOPM 2 20180312T152925 20180312T154902 C001 CS OFFL SIR IOPM 2 20180312T155155 20180312T155830 C001 CS OFFL SIR IOPM 2 20180312T160005 20180312T160806 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T161047\_20180312T164520\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T165843\_20180312T165943\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T172024\_20180312T173759\_C001 CS OFFL SIR IOPM 2 20180312T173939 20180312T174454 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T175015\_20180312T181309\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T181555\_20180312T182522\_C001 CS OFFL SIR IOPM 2 20180312T183707 20180312T183750 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T183833\_20180312T184135\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T185600\_20180312T190200\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T190347\_20180312T191705\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T192111\_20180312T192355\_C001 CS OFFL SIR IOPM 2 20180312T192953 20180312T200155 C001 CS OFFL SIR IOPM 2 20180312T202003 20180312T202659 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T202717\_20180312T205131\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T210514\_20180312T210801\_C001 CS OFFL SIR IOPM 2 20180312T210933 20180312T213837 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T215502\_20180312T215852\_C001 CS OFFL SIR IOPM 2 20180312T220020 20180312T220215 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T220406\_20180312T221608\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T222933\_20180312T223329\_C001 CS OFFL SIR IOPM 2 20180312T223944 20180312T224220 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T224241\_20180312T224708\_C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T224848\_20180312T230355\_C001 CS OFFL SIR IOPM 2 20180312T230535 20180312T230817 C001 CS\_OFFL\_SIR\_IOPM\_2\_20180312T234225\_20180312T234815\_C001 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

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Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status

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Ice Backscatter Averaging Status

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Ice Backscatter Averaging Status

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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 SWH Averaging Status, Ocean Backscatter Averaging Status 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 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 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 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 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 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 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 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 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.

CS_OFFL_SIR_IOPM_2_20180312T235057_20180313T001517_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_20180312T084639_20180312T085116_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_20180312T121552_20180312T121730_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_20180312T174759_20180312T175015_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_20180312T191705_20180312T191803_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_20180312T210928_20180312T210933_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.

#### 5.8 L2 Ocean Retracking Quality Check

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

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

Number of products with errors:

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

## 6.1 P2P Product Format Check

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

#### 6.2 P2P Product Header Analysis

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

# 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

#### 6.4 P2P Auxiliary Correction Error Check

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

57

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.

#### Number of products with errors: 29 Product Test Failed Description The Ocean and Ice Range Averaging Status Flags have been set for one Ocean Range Averaging Status, Ice CS\_OFFL\_SIR\_IOP\_2\_\_20180312T002219\_20180312T011153\_C001 Range Averaging Status or more records Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T011153\_20180312T020133\_C001 Range Averaging Status or more records. Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T020133\_20180312T025107\_C001 Range Averaging Status or more records. Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T025107\_20180312T034046\_C001 Range Averaging Status or more records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_IOP\_2\_\_20180312T034046\_20180312T043021\_C001 Ocean Range Averaging Status records. The Ocean and Ice Range Averaging Status Flags have been set for one Ocean Range Averaging Status, Ice CS\_OFFL\_SIR\_IOP\_2\_\_20180312T043021\_20180312T052000\_C001 Range Averaging Status or more records. Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T052000\_20180312T060934\_C001 Range Averaging Status or more records Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T060934\_20180312T065913\_C001 Range Averaging Status or more records The Ocean and Ice Range Averaging Status Flags have been set for one Ocean Range Averaging Status, Ice CS\_OFFL\_SIR\_IOP\_2\_\_20180312T065913\_20180312T074848\_C001 Range Averaging Status or more records Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T074848\_20180312T083827\_C001 Range Averaging Status or more records Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T083827\_20180312T092801\_C001 Range Averaging Status or more records. Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T092801\_20180312T101740\_C001 Range Averaging Status or more records Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS OFFL SIR IOP 2 20180312T101740 20180312T110715 C001 Range Averaging Status or more records Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T110715\_20180312T115654\_C001 Range Averaging Status or more records. Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T115654\_20180312T124628\_C001 Range Averaging Status or more records Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS OFFL SIR IOP 2 20180312T124628 20180312T133608 C001 Range Averaging Status or more records. Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T133608\_20180312T142542\_C001 Range Averaging Status or more records. The Ocean and Ice Range Averaging Status Flags have been set for one Ocean Range Averaging Status, Ice CS OFFL SIR IOP 2 20180312T142542 20180312T151521 C001 Range Averaging Status or more records. Ocean Range Averaging Status, Ice The Ocean and Ice Range Averaging Status Flags have been set for one CS\_OFFL\_SIR\_IOP\_2\_\_20180312T151521\_20180312T160456\_C001 Range Averaging Status or more records.

CS_OFFL_SIR_IOP_220180312T160456_20180312T165435_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_220180312T165435_20180312T174409_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_220180312T174409_20180312T183348_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180312T183348_20180312T192323_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180312T192323_20180312T201302_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180312T201302_20180312T210236_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220180312T210236_20180312T215215_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_220180312T215215_20180312T224150_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_220180312T224150_20180312T233129_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_220180312T233129_20180313T002103_C002	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_220180312T002219_20180312T011153_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_220180312T011153_20180312T020133_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_220180312T020133_20180312T025107_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_220180312T025107_20180312T034046_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_220180312T034046_20180312T043021_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_220180312T043021_20180312T052000_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_220180312T052000_20180312T060934_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_220180312T060934_20180312T065913_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_220180312T065913_20180312T074848_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_220180312T074848_20180312T083827_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_20180312T083827_20180312T092801_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_20180312T092801_20180312T101740_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_220180312T101740_20180312T110715_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_220180312T110715_20180312T115654_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_220180312T115654_20180312T124628_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_220180312T124628_20180312T133608_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_220180312T133608_20180312T142542_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_220180312T142542_20180312T151521_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_220180312T151521_20180312T160456_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_220180312T160456_20180312T165435_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_220180312T165435_20180312T174409_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_220180312T174409_20180312T183348_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_220180312T183348_20180312T192323_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_20180312T201302_20180312T210236_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_20180312T210236_20180312T215215_C001       SWH Averaging Status, Ice Backscatter Averaging Status, I	CS_OFFL_SIR_IOP_220180312T192323_20180312T201302_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_20180312T210236_20180312T215215_C001       Backscatter Averaging Status, Ice Backscatter Averaging Status, Ice Backsca	CS_OFFL_SIR_IOP_220180312T201302_20180312T210236_C001		0 0 0
CS_OFFL_SIR_IOP_2_20180312T215215_20180312T224150_C001       Backscatter Averaging Status, Ice Backscatter Averaging Status, Ice Backscatter Averaging Status       Ine SWH, Ocean and Ice Averaging Status Flags have been set for one or more records.         CS_OFFL_SIR_IOP_2_20180312T224150_20180312T233129_C001       Backscatter Averaging Status, Ice Backscatter	CS_OFFL_SIR_IOP_220180312T210236_20180312T215215_C001	Backscatter Averaging Status, Ice	
CS_OFFL_SIR_IOP_2_20180312T224150_20180312T233129_C001 Backscatter Averaging Status, Ice Backscatter Averagi	CS_OFFL_SIR_IOP_220180312T215215_20180312T224150_C001	Backscatter Averaging Status, Ice	
	CS_OFFL_SIR_IOP_220180312T224150_20180312T233129_C001	Backscatter Averaging Status, Ice	
Backscatter Averaging Status more records.	CS_OFFL_SIR_IOP_220180312T233129_20180313T002103_C002	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.

# 6.8 P2P Ocean Retracking Quality Check

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

Ocean Retracking Quality Flag: This flag is currently set for products over land and sea ice, but this is to be expected. The number of products with this error flag set is given below. Number of products with errors: 25

Product Test Failed Description CS\_OFFL\_SIR\_IOP\_2\_20180312T002219\_20180312T011153\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T011153\_20180312T020133\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T020133\_20180312T025107\_C001 The Ocean Retracking Quality Flag has been set for one or more records. Ocean Retracking Quality Flag CS OFFL SIR IOP 2 20180312T025107 20180312T034046 C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T034046\_20180312T043021\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T052000\_20180312T060934\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T060934\_20180312T065913\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T065913\_20180312T074848\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T074848\_20180312T083827\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T083827\_20180312T092801\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T092801\_20180312T101740\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS OFFL SIR IOP 2 20180312T101740 20180312T110715 C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T110715\_20180312T115654\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T115654\_20180312T124628\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T124628\_20180312T133608\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T133608\_20180312T142542\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T151521\_20180312T160456\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS OFFL SIR IOP 2 20180312T174409 20180312T183348 C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T183348\_20180312T192323\_C001 The Ocean Retracking Quality Flag has been set for one or more records. Ocean Retracking Quality Flag CS\_OFFL\_SIR\_IOP\_2\_\_20180312T192323\_20180312T201302\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS OFFL SIR IOP 2 20180312T201302 20180312T210236 C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T210236\_20180312T215215\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS\_OFFL\_SIR\_IOP\_2\_\_20180312T215215\_20180312T224150\_C001 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records. CS OFFL SIR IOP 2 20180312T224150 20180312T233129 C001 The Ocean Retracking Quality Flag has been set for one or more records. Ocean Retracking Quality Flag CS\_OFFL\_SIR\_IOP\_2\_\_20180312T233129\_20180313T002103\_C002 Ocean Retracking Quality Flag The Ocean Retracking Quality Flag has been set for one or more records.