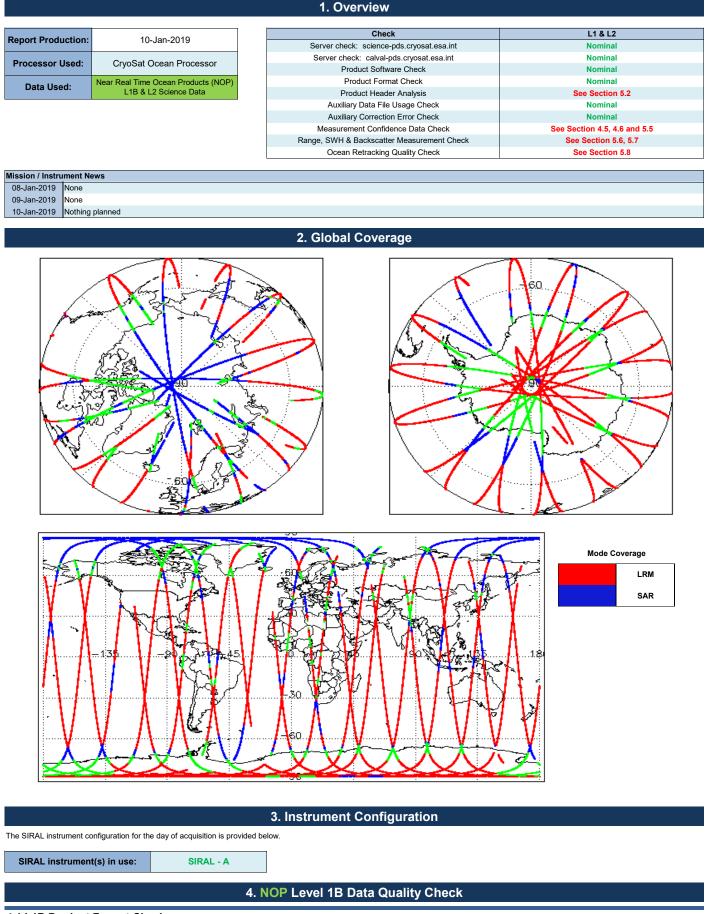


# IDEAS+ Daily Report for NOP data:

# <u>09/01/2019</u>





# 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).

0

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

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					
Number of products with errors: 0					
4.5 L1B Measurement Confidence Data Check					
CryoSat L1B data includes a measurement confidence flag for each measurer	ment record. The bit value of this flag	indicates any problems when set.			
Attitude Correction Missing: This flag is currently set in error for NOPR proc	lucts due to a configuration issue. Th	is is being investigated and will be updated in the next SW update.			
Number of products with errors: 1					
Product	Test Failed	Description			
CS_OFFL_SIR_NOPM1B_20190109T073341_20190109T074842_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records			
4.6 L1B Waveform Group Data Check					
CryoSat L1B data includes a waveform data flag for each measurement record. The bit value of this flag indicates any problems when set.					
Loss of Echo Flag: This flag is currently set for products over land, but this is to be expected.					
.oss of Echo Flag: This flag is currently set for products over land, but this is	to be expected.				
Loss of Echo Flag: This flag is currently set for products over land, but this is Number of products with errors: 18	to be expected.				
	to be expected. Test Failed	Description			
Number of products with errors: 18		Description The tracking echo is missing for one or more records			
Number of products with errors: 18 Product	Test Failed	•			
Number of products with errors:         18           Product         000000000000000000000000000000000000	Test Failed Loss of Echo	The tracking echo is missing for one or more records			
Number of products with errors:         18           Product         18           CS_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001         1000000000000000000000000000000000000	Test Failed Loss of Echo Loss of Echo	The tracking echo is missing for one or more records The tracking echo is missing for one or more records			
Number of products with errors:         18           Product         18           CS_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001         0.00000000000000000000000000000000000	Test Failed Loss of Echo Loss of Echo Loss of Echo	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			
Number of products with errors:         18           Product         05_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001	Test Failed         Loss of Echo         Loss of Echo         Loss of Echo         Loss of Echo	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			
Number of products with errors:         18           Product         18           CS_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001         0.00000000000000000000000000000000000	Test Failed         Loss of Echo	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			
Number of products with errors:         18           Product         18           CS_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001         0           CS_OFFL_SIR_NOPM1B_20190109T183822_20190109T185405_C001         0           CS_OFFL_SIR_NOPM1B_20190109T000227_20190109T000242_C001         0           CS_OFFL_SIR_NOPN1B_20190109T013035_20190109T013209_C001         0           CS_OFFL_SIR_NOPN1B_20190109T015246_20190109T015450_C001         0	Test Failed         Loss of Echo	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			
Number of products with errors:         18           Product         18           SS_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001         0.00000000000000000000000000000000000	Test Failed         Loss of Echo	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			
Number of products with errors:         18           Product         S_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001           CS_OFFL_SIR_NOPM1B_20190109T183822_20190109T185405_C001         S_OFFL_SIR_NOPM1B_20190109T000227_20190109T000242_C001           CS_OFFL_SIR_NOPM1B_20190109T013035_20190109T013209_C001         S_OFFL_SIR_NOPM1B_20190109T015246_20190109T015450_C001           CS_OFFL_SIR_NOPM1B_20190109T063832_20190109T063954_C001         S_OFFL_SIR_NOPM1B_20190109T063832_20190109T063954_C001           CS_OFFL_SIR_NOPM1B_20190109T095714_20190109T100202_C001         S_OFFL_SIR_NOPM1B_20190109T144416_20190109T144543_C001           CS_OFFL_SIR_NOPM1B_20190109T153726_20190109T154138_C001         S_OFFL_SIR_NOPM1B_20190109T153726_20190109T154138_C001	Test Failed         Loss of Echo	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			
Number of products with errors:         18           Product         18           CS_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001         0           CS_OFFL_SIR_NOPM1B_20190109T183822_20190109T185405_C001         0           CS_OFFL_SIR_NOPM1B_20190109T000227_20190109T000242_C001         0           CS_OFFL_SIR_NOPN1B_20190109T013035_20190109T013209_C001         0           CS_OFFL_SIR_NOPN1B_20190109T015246_20190109T015450_C001         0           CS_OFFL_SIR_NOPN1B_20190109T063832_20190109T063954_C001         0           CS_OFFL_SIR_NOPN1B_20190109T063832_20190109T00202_C001         0	Test Failed         Loss of Echo	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			
Number of products with errors:         18           Product         S_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001           CS_OFFL_SIR_NOPM1B_20190109T183822_20190109T185405_C001         S_OFFL_SIR_NOPM1B_20190109T000227_20190109T000242_C001           CS_OFFL_SIR_NOPN1B_20190109T013035_20190109T013209_C001         S_OFFL_SIR_NOPN1B_20190109T015246_20190109T015450_C001           CS_OFFL_SIR_NOPN1B_20190109T063832_20190109T063954_C001         S_OFFL_SIR_NOPN1B_20190109T063832_20190109T063954_C001           CS_OFFL_SIR_NOPN1B_20190109T05714_20190109T100202_C001         S_OFFL_SIR_NOPN1B_20190109T144416_20190109T144543_C001           CS_OFFL_SIR_NOPN1B_20190109T153726_20190109T154138_C001         S_OFFL_SIR_NOPN1B_20190109T162503_20190109T162551_C001           CS_OFFL_SIR_NOPN1B_20190109T162503_20190109T194407_C001         S_OFFL_SIR_NOPN1B_20190109T162503_20190109T194407_C001	Test Failed         Loss of Echo	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			
Number of products with errors:         18           Product         S_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001           CS_OFFL_SIR_NOPM1B_20190109T183822_20190109T185405_C001         S_OFFL_SIR_NOPM1B_20190109T000227_20190109T000242_C001           CS_OFFL_SIR_NOPN1B_20190109T013035_20190109T013209_C001         S_OFFL_SIR_NOPN1B_20190109T015246_20190109T015450_C001           CS_OFFL_SIR_NOPN1B_20190109T063832_20190109T063954_C001         S_OFFL_SIR_NOPN1B_20190109T063832_20190109T063954_C001           CS_OFFL_SIR_NOPN1B_20190109T05714_20190109T145433_C001         S_OFFL_SIR_NOPN1B_20190109T153726_20190109T145433_C001           CS_OFFL_SIR_NOPN1B_20190109T162503_20190109T154138_C001         S_OFFL_SIR_NOPN1B_20190109T162503_20190109T162551_C001           CS_OFFL_SIR_NOPN1B_20190109T194257_20190109T194407_C001         S_OFFL_SIR_NOPN1B_20190109T194257_20190109T194407_C001	Test Failed         Loss of Echo	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         The tracking echo is missing for one or more records			
Image:	Test FailedLoss of EchoLoss of Echo	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			
Itember of products with errors:         18           Product         ScoFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001           CS_OFFL_SIR_NOPM1B_20190109T00227_20190109T000242_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T010305_20190109T013209_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T015246_20190109T015450_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T015246_20190109T015450_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T053832_20190109T063954_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T05714_20190109T104202_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T153726_20190109T144543_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T162503_20190109T162551_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T162503_20190109T162551_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T194257_20190109T194407_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T194649_20190109T194407_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T194649_20190109T194407_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T194649_20190109T194407_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T194649_20190109T194407_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T194649_20190109T194407_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T194649_20190109T194407_C001         CO           CS_OFFL_SIR_NOPN1B_20190109T	Test Failed         Loss of Echo	The tracking echo is missing for one or more records           The tracking echo is missing for one or more records			
Number of products with errors:         18           Product         S2_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001           CS_OFFL_SIR_NOPM1B_20190109T183822_20190109T185405_C001         S2_OFFL_SIR_NOPM1B_20190109T00227_20190109T00242_C001           CS_OFFL_SIR_NOPM1B_20190109T013035_20190109T013209_C001         S2_OFFL_SIR_NOPM1B_20190109T015246_20190109T015450_C001           CS_OFFL_SIR_NOPM1B_20190109T063832_20190109T063954_C001         S2_OFFL_SIR_NOPM1B_20190109T063832_20190109T063954_C001           CS_OFFL_SIR_NOPM1B_20190109T05714_20190109T100202_C001         S2_OFFL_SIR_NOPM1B_20190109T153726_20190109T144543_C001           CS_OFFL_SIR_NOPM1B_20190109T153726_20190109T154138_C001         S2_OFFL_SIR_NOPM1B_20190109T162503_20190109T162551_C001           CS_OFFL_SIR_NOPM1B_20190109T194257_20190109T194407_C001         S2_OFFL_SIR_NOPM1B_20190109T19457_20190109T194902_C001           CS_OFFL_SIR_NOPM1B_20190109T194649_20190109T194902_C001         S2_OFFL_SIR_NOPM1B_20190109T125830_20190109T194902_C001           CS_OFFL_SIR_NOPM1B_20190109T125830_20190109T125918_C001         S2_OFFL_SIR_NOPM1B_20190109T125830_20190109T144038_C001	Test FailedLoss of EchoLoss of Echo <td>The tracking echo is missing for one or more records         The tracking e</td>	The tracking echo is missing for one or more records         The tracking e			
Number of products with errors:         18           Product         18           CS_OFFL_SIR_NOPM1B_20190109T151347_20190109T153550_C001         0           CS_OFFL_SIR_NOPM1B_20190109T183822_20190109T185405_C001         0           CS_OFFL_SIR_NOPN1B_20190109T000227_20190109T000242_C001         0           CS_OFFL_SIR_NOPN1B_20190109T013035_20190109T013209_C001         0           CS_OFFL_SIR_NOPN1B_20190109T015246_20190109T015450_C001         0           CS_OFFL_SIR_NOPN1B_20190109T063832_20190109T063954_C001         0           CS_OFFL_SIR_NOPN1B_20190109T05714_20190109T1063954_C001         0           CS_OFFL_SIR_NOPN1B_20190109T05714_20190109T100202_C001         0           CS_OFFL_SIR_NOPN1B_20190109T153726_20190109T144543_C001         0           CS_OFFL_SIR_NOPN1B_20190109T153726_20190109T162551_C001         0	Test Failed         Loss of Echo	The tracking echo is missing for one or more records         The tracking e			

### 5.1 L2 Product Format Check

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

#### 5.2 L2 Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. Number of products with errors: 0

#### 5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

#### 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).

1

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:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20190109T073341_20190109T074842_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

#### 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.

ean 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. 79

Number of products with errors:

Product Test Failed Description The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T001553 20190109T002156 C001 Ocean Range Averaging Status ecords The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T002159\_20190109T004258\_C001 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T004445 20190109T005256 C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T005643\_20190109T013035\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T014337 20190109T014534 C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T021204 20190109T021309 C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T021426\_20190109T022226\_C001 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T022425 20190109T022945 C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T023527\_20190109T025756\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T030042\_20190109T031011\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T032318\_20190109T032618\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFEL\_SIR\_NOPM\_2\_20190109T034204\_20190109T034650\_C001 Ocean Range Averaging Status ecords The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T034837\_20190109T040018\_C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T040100\_20190109T040156\_C001 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T040510 20190109T040845 C001 Ice Range Averaging Status ecords The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T041507\_20190109T042044\_C001 Ocean Range Averaging Status ecords The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T042054\_20190109T044643\_C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T050508 20190109T053624 C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T055423\_20190109T061214\_C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T061654\_20190109T062352\_C001 Ocean Range Averaging Status ecords The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T063954 20190109T064409 C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T064521\_20190109T070057\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T070716 20190109T071853 C001 Ocean Range Averaging Status The Ice Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T072737\_20190109T073159\_C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T073341\_20190109T074842\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T075021 20190109T080507 C001 Ocean Range Averaging Status ecords The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T082716\_20190109T083425\_C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T083547\_20190109T084035\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T084325 20190109T085944 C001 Ocean Range Averaging Status ecords The Ice Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T090229\_20190109T091109\_C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T091324\_20190109T093602\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T101318 20190109T103907 C001 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T104146\_20190109T104333\_C001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T104433\_20190109T104904\_C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T105150 20190109T111802 C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T114923\_20190109T120053\_C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T120629 20190109T121712 C001 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T122350\_20190109T122941\_C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T123117 20190109T125334 C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T132214 20190109T135700 C001 Ocean Range Averaging Status ecords The Ice Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T140256\_20190109T140812\_C001 Ice Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T141010\_20190109T141253\_C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190109T141453 20190109T141712 C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T144543\_20190109T144811\_C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_NOPM\_2\_20190109T150221\_20190109T151101\_C001 Ocean Range Averaging Status records

CS_OFFL_SIR_NOPM_2_20190109T151347_20190109T153550_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T154305_20190109T154711_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T154918_20190109T160218_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T160406_20190109T161117_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T161201_20190109T161641_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T164214_20190109T171456_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T171639_20190109T172155_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T172202_20190109T172208_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T173256_20190109T180311_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T182347_20190109T183617_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T183822_20190109T185405_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T185551_20190109T190053_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T191015_20190109T192033_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T192652_20190109T193746_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T201359_20190109T201642_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T201821_20190109T203251_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T203504_20190109T204003_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T204011_20190109T204023_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T204635_20190109T212025_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T214820_20190109T221252_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T221549_20190109T221920_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T221942_20190109T222310_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T222534_20190109T225447_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T232644_20190109T235151_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T235331_20190109T235834_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T235841_20190110T000208_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190109T071853_20190109T072140_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190109T082128_20190109T082356_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190109T131057_20190109T131123_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190109T021309_20190109T021425_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190109T055416_20190109T055422_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190109T140924_20190109T141010_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190109T145910_20190109T145952_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190109T194555_20190109T194649_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. 76

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20190109T001553_20190109T002156_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_NOPM_2_20190109T002159_20190109T004258_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_NOPM_2_20190109T004445_20190109T005256_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T005643_20190109T013035_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_NOPM_2_20190109T014337_20190109T014534_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_NOPM_2_20190109T021426_20190109T022226_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_NOPM_2_20190109T023527_20190109T025756_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_NOPM_2_20190109T030042_20190109T031011_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_NOPM_2_20190109T032318_20190109T032618_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\_NOPM\_2\_20190109T034204\_20190109T034650\_C001 CS OFFL SIR NOPM 2 20190109T034837 20190109T040018 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T040100\_20190109T040156\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T041507\_20190109T042044\_C001 CS OFFL SIR NOPM 2 20190109T042054 20190109T044643 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T050508\_20190109T053624\_C001 CS OFFL SIR NOPM 2 20190109T055423 20190109T061214 C001 CS OFFL SIR NOPM 2 20190109T061654 20190109T062352 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T063954\_20190109T064409\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T064521\_20190109T070057\_C001 CS OFFL SIR NOPM 2 20190109T070716 20190109T071853 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T072737\_20190109T073159\_C001 CS OFFL SIR NOPM 2 20190109T073341 20190109T074842 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T075021\_20190109T080507\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T082716\_20190109T083425\_C001 CS OFFL SIR NOPM 2 20190109T084325 20190109T085944 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T090229\_20190109T091109\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T091324\_20190109T093602\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T101318\_20190109T103907\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T104146\_20190109T104333\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T104433\_20190109T104904\_C001 CS OFFL SIR NOPM 2 20190109T105150 20190109T111802 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T114923\_20190109T120053\_C001 CS OFFL SIR NOPM 2 20190109T120629 20190109T121712 C001 CS OFFL SIR NOPM 2 20190109T122350 20190109T122941 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T123117\_20190109T125334\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T125337\_20190109T125830\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T132214\_20190109T135700\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T140256\_20190109T140812\_C001 CS OFFL SIR NOPM 2 20190109T141010 20190109T141253 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T141453\_20190109T141712\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T144543\_20190109T144811\_C001 CS OFFL SIR NOPM 2 20190109T150221 20190109T151101 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T151347\_20190109T153550\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T154305\_20190109T154711\_C001 CS OFFL SIR NOPM 2 20190109T154918 20190109T160218 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T160406\_20190109T161117\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T161201\_20190109T161641\_C001 CS OFFL SIR NOPM 2 20190109T164214 20190109T171456 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T171639\_20190109T172155\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T172202\_20190109T172208\_C001 CS OFFL SIR NOPM 2 20190109T173256 20190109T180311 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T182347\_20190109T183617\_C001 CS OFFL SIR NOPM 2 20190109T183822 20190109T185405 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T185551\_20190109T190053\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T191015\_20190109T192033\_C001 CS OFFL SIR NOPM 2 20190109T192652 20190109T193746 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T201359\_20190109T201642\_C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T201821\_20190109T203251\_C001 CS OFFL SIR NOPM 2 20190109T203504 20190109T204003 C001 CS\_OFFL\_SIR\_NOPM\_2\_20190109T204011\_20190109T204023\_C001 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

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Ice Backscatter Averaging Status

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Ice Backscatter Averaging Status

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Ice Backscatter Averaging Status

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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 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.

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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.

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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.

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

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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.

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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.

CS_OFFL_SIR_NOPM_2_20190109T204635_20190109T212025_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_NOPM_2_20190109T214820_20190109T221252_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_NOPM_2_20190109T221549_20190109T221920_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T221942_20190109T222310_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T222534_20190109T225447_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_NOPM_2_20190109T232644_20190109T235151_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_NOPM_2_20190109T235331_20190109T235834_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190109T235841_20190110T000208_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190109T071853_20190109T072140_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190109T082128_20190109T082356_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_NOPN_2_20190109T131057_20190109T131123_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_NOPR_2_20190109T021309_20190109T021425_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_NOPR_2_20190109T055416_20190109T055422_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_NOPR_2_20190109T140924_20190109T141010_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_NOPR_2_20190109T145910_20190109T145952_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_NOPR_2_20190109T194555_20190109T194649_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.

55

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: