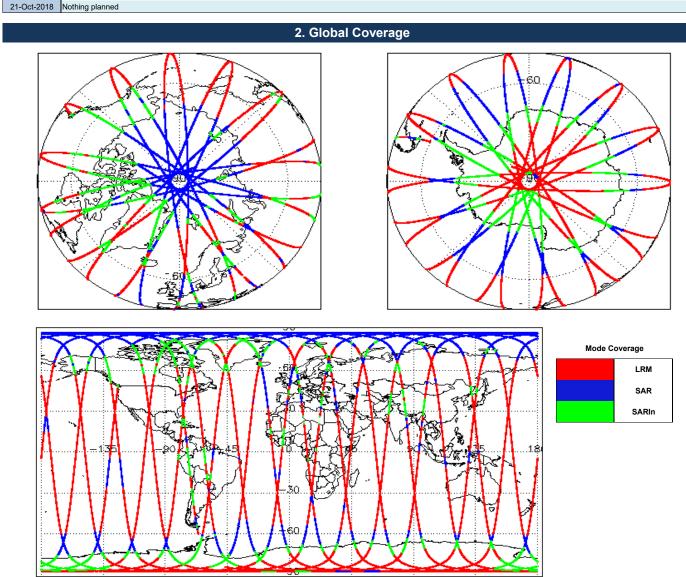


# IDEAS+ Daily Report for GOP data:

# 20/10/2018

| Report Production:                      | 20-Nov-2018                      | Check                                      | L1 & L2                      | P2P                  |
|---|----------------------------------|--|------------------------------|----------------------|
| report Production.                      | 20-1100-2018                     | Server check: science-pds.cryosat.esa.int  | Nominal                      | Nominal              |
| Processor Used:                         | Cruces at Occor Brosses          | Server check: calval-pds.cryosat.esa.int   | Nominal                      | Nominal              |
| Processor Used: CryoSat Ocean Processor | CryoSal Ocean Processor          | Product Software Check                     | Nominal                      | Nominal              |
| Data Used:                              | Geophysical Ocean Products (GOP) | Product Format Check                       | Nominal                      | Nominal              |
| Data Useu.                              | L1B, L2 & P2P Science Data       | Product Header Analysis                    | Nominal                      | Nominal              |
|   |                                  | Auxiliary Data File Usage Check            | Nominal                      | Nominal              |
|   |                                  | Auxiliary Correction Error Check           | Nominal                      | Nominal              |
|   |                                  | Measurement Confidence Data Check          | See Section 4.5, 4.6 and 5.5 | See Section 6.5      |
|   |                                  | Range, SWH & Backscatter Measurement Check | See Section 5.6, 5.7         | See Section 6.6, 6.7 |
|   |                                  | Ocean Retracking Quality Check             | See Section 5.8              | See Section 6.8      |

| wission / instrument news |      |  |  |
|---------------------------|------|--|--|
| 19-Oct-2018               | None |  |  |
| 20-Oct-2018               | None |  |  |
|                           |      |  |  |



# 3. Instrument Configuration

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

SIRAL - A

0

SIRAL instrument(s) in use:

4. GOP Level 1B Data Quality Check

# 4.1 L1B Product Format Check

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

Number of products with errors:

## 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

| 4.2 L4D Auvilant Data File Llagra Chaola   |  |  |
|--|--|--|
| 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 v                          | alidity 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 prob                      | ems 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 measurement   | ent record. The bit value of this flag indicates                     | any problems when set.   |
| Attitude Correction Missing: This flag is currently set in error for GOPR produ  | cts due to a configuration issue. This is bein                       | g investigated and will be updated in the next SW update.  |
| Number of products with errors: 1  |  |  |
| Product  | Test Failed  | Description  |
| CS_OFFL_SIR_GOPM1B_20181020T041438_20181020T041951_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 proble                      | ems when set.  |
| , ,  | 0 ,1   | ems when set.  |
| CryoSat L1B data includes a waveform data flag for each measurement record.<br>Loss of Echo Flag: This flag is currently set for some products over land, but the<br>Number of products with errors: 14  | 0 ,1   | ems when set.  |
| Loss of Echo Flag: This flag is currently set for some products over land, but the lumber of products with errors: 14  | 0 ,1   | Description  |
| .oss of Echo Flag: This flag is currently set for some products over land, but the lumber of products with errors:       14         Product       14   | his is to be expected.   |  |
| .coss of Echo Flag: This flag is currently set for some products over land, but the state of products with errors:       14         Product       25_OFFL_SIR_GOPM1B_20181020T233444_20181020T235057_C001  | his is to be expected.   | Description  |
| coss of Echo Flag: This flag is currently set for some products over land, but the state of products with errors:       14         Product       14         CS_OFFL_SIR_GOPM1B_20181020T233444_20181020T235057_C001       000000000000000000000000000000000000     | his is to be expected.           Test Failed           Loss of Echo  | Description<br>The tracking echo is missing for one or more records  |
| Loss of Echo Flag: This flag is currently set for some products over land, but the   | Test Failed<br>Loss of Echo  | Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records  |
| Loss of Echo Flag: This flag is currently set for some products over land, but the the term of products with errors:       14         Product       14         CS_OFFL_SIR_GOPM1B_20181020T233444_20181020T235057_C001       1000000000000000000000000000000000000 | 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 |

| Product   | Test Failed  | Description  |
|---|--------------|--|
| CS_OFFL_SIR_GOPM1B_20181020T233444_20181020T235057_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20181020T004207_20181020T004718_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20181020T105147_20181020T105305_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20181020T112649_20181020T113229_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20181020T122554_20181020T122803_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20181020T130835_20181020T131012_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20181020T140506_20181020T140952_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20181020T203434_20181020T203840_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20181020T235438_20181020T235650_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPR1B_20181020T022541_20181020T023434_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPR1B_20181020T050200_20181020T050620_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPR1B_20181020T103941_20181020T104508_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPR1B_20181020T135722_20181020T140506_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPR1B_20181020T203841_20181020T204619_C001 | Loss of Echo | The tracking echo is missing for one or more records |

# 5. GOP Level 2 Data Quality Check

## 5.1 L2 Product Format Check

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

## 5.3 L2 Auxiliary Data File Usage Check

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

## 5.4 L2 Auxiliary Correction Error Check

For all products, the auxiliary corrections within the Geophysical Group are checked for the default error value (32767). 0

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## 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.

| Product   | Test Failed         | Description   |
|---|---------------------|---|
| CS_OFFL_SIR_GOPM_2_20181020T041438_20181020T041951_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. 85

Number of products with errors:

Product Test Failed Description The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T000002 20181020T000117 C001 Ice Range Averaging Status ecords The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T000810\_20181020T000908\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T001713 20181020T002001 C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T002748\_20181020T002958\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T003121 20181020T003832 C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T003955 20181020T004206 C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T010849\_20181020T011219\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T011356 20181020T013012 C001 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T013442\_20181020T013854\_C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T014625\_20181020T021953\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T024545\_20181020T030918\_C001 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T031244 20181020T031808 C001 Ice Range Averaging Status ecords The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T032529\_20181020T033610\_C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T034147\_20181020T035716\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T041132 20181020T041152 C001 Ocean Range Averaging Status ecords The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T042041\_20181020T044305\_C001 Ocean Range Averaging Status ecords The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T044428\_20181020T044838\_C001 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T045239 20181020T050047 C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T050620\_20181020T053813\_C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T062137\_20181020T062638\_C001 Ocean Range Averaging Status ecords The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T063216 20181020T063734 C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T064454\_20181020T070547\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T070833 20181020T072021 C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T072926\_20181020T073407\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T074956\_20181020T075438\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T075626 20181020T080611 C001 Ocean Range Averaging Status ecords The Ice Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T081333\_20181020T081634\_C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T082351\_20181020T085820\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T091254 20181020T091948 C001 Ocean Range Averaging Status ecords. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T092002\_20181020T094411\_C001 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T095347\_20181020T095540\_C001 Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T095813 20181020T100026 C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T100309\_20181020T102005\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T102028\_20181020T103131\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T105305 20181020T110846 C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T111505\_20181020T112620\_C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T114249\_20181020T115633\_C001 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T115910\_20181020T120511\_C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T123824 20181020T124212 C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T124335 20181020T124914 C001 Ocean Range Averaging Status ecords The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T125009\_20181020T130617\_C001 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T131012\_20181020T131901\_C001 Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T132233 20181020T134334 C001 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more CS\_OFFL\_SIR\_GOPM\_2\_20181020T142020\_20181020T144546\_C001 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more CS OFFL SIR GOPM 2 20181020T145224 20181020T145651 C001 Ice Range Averaging Status records

CS\_OFFL\_SIR\_GOPM\_2\_20181020T150153\_20181020T152730\_C001 CS OFFL SIR GOPM 2 20181020T153654 20181020T153724 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T153739\_20181020T153916\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T155410\_20181020T160840\_C001 CS OFFL SIR GOPM 2 20181020T161416 20181020T162329 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T163139\_20181020T163730\_C001 CS OFFL SIR GOPM 2 20181020T164101 20181020T170530 C001 CS OFFL SIR GOPM 2 20181020T171638 20181020T171816 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T173003\_20181020T180308\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T181045\_20181020T181601\_C001 CS OFFL SIR GOPM 2 20181020T182244 20181020T182553 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T185323\_20181020T185733\_C001 CS OFFL SIR GOPM 2 20181020T190735 20181020T191850 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T192136\_20181020T194249\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T194922\_20181020T195046\_C001 CS OFFL SIR GOPM 2 20181020T195053 20181020T195502 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T200037\_20181020T201010\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T201158\_20181020T201915\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T202007\_20181020T202432\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T203225\_20181020T203254\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T203342\_20181020T203421\_C001 CS OFFL SIR GOPM 2 20181020T204622 20181020T210630 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T210633\_20181020T212146\_C001 CS OFFL SIR GOPM 2 20181020T212419 20181020T212944 C001 CS OFFL SIR GOPM 2 20181020T213004 20181020T213240 C001 CS OFFL SIR GOPM 2 20181020T214047 20181020T215318 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T215334\_20181020T221102\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T223225\_20181020T224407\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T224611\_20181020T230051\_C001 CS OFFL SIR GOPM 2 20181020T230342 20181020T230841 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T230921\_20181020T231043\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T231754\_20181020T232611\_C001 CS OFFL SIR GOPM\_2\_20181020T233444\_20181020T235057\_C001 CS\_OFFL\_SIR\_GOPN\_2\_20181020T013855\_20181020T013900\_C001 CS OFFL SIR GOPN 2 20181020T022406 20181020T022540 C001 CS OFFL SIR GOPN 2 20181020T194503 20181020T194921 C001 CS OFFL SIR GOPR 2 20181020T044838 20181020T045115 C001 CS OFFL SIR GOPR 2 20181020T114128 20181020T114249 C001 CS OFFL SIR GOPR 2 20181020T171913 20181020T172703 C001 CS\_OFFL\_SIR\_GOPR\_2\_20181020T194249\_20181020T194503\_C001

The Ocean 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 Ocean Range Averaging Status ecords The Ocean 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 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more Ice Range Averaging Status records The Ocean 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 Ocean Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more Ice Range Averaging Status The Ocean 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 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more Ocean Range Averaging Status ecords The Ocean Range Averaging Status Flag has been set for one or more Ocean Range Averaging Status records. The Ice Range Averaging Status Flag has been set for one or more Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more Ice Range Averaging Status records The Ocean 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 Ocean Range Averaging Status records The Ocean 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 Ocean Range Averaging Status records. The Ocean 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 Ocean Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more Ice Range Averaging Status records The Ocean 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 Ocean Range Averaging Status ecords The Ocean 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 Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more Ice Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more Ice Range Averaging Status records The Ocean 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 Ocean Range Averaging Status ecords The Ice Range Averaging Status Flag has been set for one or more Ice Range Averaging Status records The Ocean Range Averaging Status Flag has been set for one or more Ocean Range Averaging Status records The Ice Range Averaging Status Flag has been set for one or more Ice Range Averaging Status records. The Ocean 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 Ocean Range Averaging Status records. The Ocean 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 Ocean Range Averaging Status 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

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. 84

| Product   | Test Failed                      | Description  |
|---|----------------------------------|--|
| CS_OFFL_SIR_GOPM_2_20181020T000002_20181020T000117_C001 | Ice Backscatter Averaging Status | The Ice Backscatter Averaging Status Flag has been set for one or more records.    |
| CS_OFFL_SIR_GOPM_2_20181020T000810_20181020T000908_C001 |                                  | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |
| CS_OFFL_SIR_GOPM_2_20181020T001713_20181020T002001_C001 |                                  | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |

CS\_OFFL\_SIR\_GOPM\_2\_20181020T002748\_20181020T002958\_C001 CS OFFL SIR GOPM 2 20181020T003121 20181020T003832 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T003955\_20181020T004206\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T010849\_20181020T011219\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T011356\_20181020T013012\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T013442\_20181020T013854\_C001 CS OFFL SIR GOPM 2 20181020T014625 20181020T021953 C001 CS OFFL SIR GOPM 2 20181020T024545 20181020T030918 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T031244\_20181020T031808\_C001 CS OFFL SIR GOPM 2 20181020T032529 20181020T033610 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T034147\_20181020T035716\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T041132\_20181020T041152\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T042041\_20181020T044305\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T044428\_20181020T044838\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T045239\_20181020T050047\_C001 CS OFFL SIR GOPM 2 20181020T050620 20181020T053813 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T062137\_20181020T062638\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T064454\_20181020T070547\_C001 CS OFFL SIR GOPM 2 20181020T070833 20181020T072021 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T072926\_20181020T073407\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T074956\_20181020T075438\_C001 CS OFFL SIR GOPM 2 20181020T075626 20181020T080611 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T082351\_20181020T085820\_C001 CS OFFL SIR GOPM 2 20181020T091254 20181020T091948 C001 CS OFFL SIR GOPM 2 20181020T092002 20181020T094411 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T095347\_20181020T095540\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T095813\_20181020T100026\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T100309\_20181020T102005\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T102028\_20181020T103131\_C001 CS OFFL SIR GOPM 2 20181020T104742 20181020T105147 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T105305\_20181020T110846\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T111505\_20181020T112620\_C001 CS OFFL SIR GOPM 2 20181020T113229 20181020T113456 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T113523\_20181020T113948\_C001 CS OFFL SIR GOPM 2 20181020T114249 20181020T115633 C001 CS OFFL SIR GOPM 2 20181020T115813 20181020T115907 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T115910\_20181020T120511\_C001 CS OFFL SIR GOPM 2 20181020T123824 20181020T124212 C001 CS OFFL SIR GOPM 2 20181020T124335 20181020T124914 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T125009\_20181020T130617\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T131012\_20181020T131901\_C001 CS OFFL SIR GOPM 2 20181020T132233 20181020T134334 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T142020\_20181020T144546\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T145224\_20181020T145651\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T150153\_20181020T152730\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T153654\_20181020T153724\_C001 CS OFFL SIR GOPM 2 20181020T153739 20181020T153916 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T155410\_20181020T160840\_C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T161416\_20181020T162329\_C001 CS OFFL SIR GOPM 2 20181020T163139 20181020T163730 C001 CS\_OFFL\_SIR\_GOPM\_2\_20181020T164101\_20181020T170530\_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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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 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 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 SWH and Ocean Averaging Status Flags have been set for one or more records.

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

The 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.

| CS_OFFL_SIR_GOPM_2_20181020T171638_20181020T171816_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
|---|---|--|--|--|
| CS_OFFL_SIR_GOPM_2_20181020T173003_20181020T180308_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T181045_20181020T181601_C001   | Ice Backscatter Averaging Status                            | The Ice Backscatter Averaging Status Flag has been set for one or more records.    |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T182244_20181020T182553_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T185323_20181020T185733_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T190735_20181020T191850_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T192136_20181020T194249_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T194922_20181020T195046_C001   | Ice Backscatter Averaging Status                            | The Ice Backscatter Averaging Status Flag has been set for one or more<br>records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T195053_20181020T195502_C001   | Ice Backscatter Averaging Status                            | The Ice Backscatter Averaging Status Flag has been set for one or more records.    |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T200037_20181020T201010_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T201158_20181020T201915_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T202007_20181020T202432_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T204622_20181020T210630_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T210633_20181020T212146_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T212419_20181020T212944_C001   | Ice Backscatter Averaging Status                            | The Ice Backscatter Averaging Status Flag has been set for one or more records.    |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T213004_20181020T213240_C001   | Ice Backscatter Averaging Status                            | The Ice Backscatter Averaging Status Flag has been set for one or more records.    |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T214047_20181020T215318_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T215334_20181020T221102_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T221433_20181020T221643_C001   | Ice Backscatter Averaging Status                            | The Ice Backscatter Averaging Status Flag has been set for one or more records.    |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T223225_20181020T224407_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T224611_20181020T230051_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T230342_20181020T230841_C001   | Ice Backscatter Averaging Status                            | The Ice Backscatter Averaging Status Flag has been set for one or more records.    |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T230921_20181020T231043_C001   | Ice Backscatter Averaging Status                            | The Ice Backscatter Averaging Status Flag has been set for one or more records.    |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T231754_20181020T232611_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPM_2_20181020T233444_20181020T235057_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPN_2_20181020T013855_20181020T013900_C001   | Ice Backscatter Averaging Status                            | The Ice Backscatter Averaging Status Flag has been set for one or more<br>records. |  |  |
| CS_OFFL_SIR_GOPN_2_20181020T022406_20181020T022540_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or more records.    |  |  |
| CS_OFFL_SIR_GOPN_2_20181020T194503_20181020T194921_C001   | Ice Backscatter Averaging Status                            | The Ice Backscatter Averaging Status Flag has been set for one or more records.    |  |  |
| CS_OFFL_SIR_GOPR_2_20181020T044838_20181020T045115_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPR_2_20181020T114128_20181020T114249_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPR_2_20181020T171913_20181020T172703_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| CS_OFFL_SIR_GOPR_2_20181020T194249_20181020T194503_C001   | SWH Averaging Status, Ocean<br>Backscatter Averaging Status | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records. |  |  |
| 5.8 L2 Ocean Retracking Quality Check   |   |  |  |  |
|   |   |  |  |  |
| CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz measur<br>Ocean Retracking Quality Flag: This flag is currently set for products over land | -   |  |  |  |
| Number of products with errors:         68  |   |  |  |  |
| 6. GOP L2   | Pole-to-Pole Data Quali                                     | ty Check   |  |  |
| 6.1 P2P Product Format Check  |   |  |  |  |
| Each product, retrieved and unpacked from the science server, is checked to ens   | ure it consists of both an XMI header file                  | (.HDR) and a NetCDF product file (.nc).  |  |  |
| Number of products with errors: 0   |   | , (),  |  |  |
| 6 2 P2P Product Header Analysis   |   |  |  |  |
| 6.2 P2P Product Header Analysis   |   |  |  |  |

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

Number of products with errors:

# 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

## 6.4 P2P Auxiliary Correction Error Check

For all products, the auxiliary corrections within the Geophysical Group are checked for the default error value (32767). 0

0

0

#### 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.

|--|

| Product  | Test Failed         | Description   |
|--|---------------------|---|
| CS_OFFL_SIR_GOP_2_20181020T040757_20181020T045732_C001 | Power scaling error | There is an error in the scaling of the L2 waveform for one or more records |
|  |                     | ·   |

## 6.6 P2P Range Measurement Check

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

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

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

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

Number of products with errors:

| Product  | Test Failed   | Description  |
|--|---|--|
| CS_OFFL_SIR_GOP_220181019T235951_20181020T004929_C002  | Ocean Range Averaging Status                                | The Ocean Range Averaging Status Flag has been set for one or more records.              |
| CS_OFFL_SIR_GOP_220181020T004929_20181020T013905_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T013905_20181020T022843_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T022843_20181020T031819_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T031819_20181020T040757_C001  | Ocean Range Averaging Status                                | The Ocean Range Averaging Status Flag has been set for one or more records.              |
| CS_OFFL_SIR_GOP_220181020T040757_20181020T045732_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T045732_20181020T054710_C001  | Ocean Range Averaging Status                                | The Ocean Range Averaging Status Flag has been set for one or more records.              |
| CS_OFFL_SIR_GOP_2_20181020T054710_20181020T063646_C001 | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T063646_20181020T072624_C001  | Ocean Range Averaging Status                                | The Ocean Range Averaging Status Flag has been set for one or more records.              |
| CS_OFFL_SIR_GOP_220181020T072624_20181020T081559_C001  | Ocean Range Averaging Status                                | The Ocean Range Averaging Status Flag has been set for one or more records.              |
| CS_OFFL_SIR_GOP_220181020T081559_20181020T090537_C001  | Ocean Range Averaging Status                                | The Ocean Range Averaging Status Flag has been set for one or more<br>records.           |
| CS_OFFL_SIR_GOP_220181020T090537_20181020T095513_C001  | Ocean Range Averaging Status                                | The Ocean Range Averaging Status Flag has been set for one or more records.              |
| CS_OFFL_SIR_GOP_2_20181020T095513_20181020T104451_C001 | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T104451_20181020T113426_C001  | Ocean Range Averaging Status                                | The Ocean Range Averaging Status Flag has been set for one or more records.              |
| CS_OFFL_SIR_GOP_2_20181020T113426_20181020T122404_C001 | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T122404_20181020T131340_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T131340_20181020T140318_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T140318_20181020T145254_C001  | Ocean Range Averaging Status                                | The Ocean Range Averaging Status Flag has been set for one or more records.              |
| CS_OFFL_SIR_GOP_220181020T145254_20181020T154232_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T154232_20181020T163207_C001  | Ocean Range Averaging Status                                | The Ocean Range Averaging Status Flag has been set for one or more records.              |
| CS_OFFL_SIR_GOP_220181020T163207_20181020T172145_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T172145_20181020T181121_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T181121_20181020T190059_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T190059_20181020T195034_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T195034_20181020T204012_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T204012_20181020T212948_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_2_20181020T212948_20181020T221926_C001 | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T221926_20181020T230901_C001  | Ocean Range Averaging Status, Ice<br>Range Averaging Status | The Ocean and Ice Range Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T230901_20181020T235839_C001  | Ocean Range Averaging Status                                | The Ocean Range Averaging Status Flag has been set for one or more records.              |

### 6.7 P2P SWH and Backscatter Measurement Check

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

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

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

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

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

| Product   | Test Failed  | Description   |
|---|--------------|---|
|   | <b>3 3</b> · | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records.      |
| CS_OFFL_SIR_GOP_220181020T004929_20181020T013905_C001 |              | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |

| CS_OFFL_SIR_GOP_220181020T013905_20181020T022843_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
|---|--|---|
| CS_OFFL_SIR_GOP_220181020T022843_20181020T031819_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T031819_20181020T040757_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status                                      | The SWH and Ocean Averaging Status Flags have been set for one or more records.         |
| CS_OFFL_SIR_GOP_220181020T040757_20181020T045732_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T045732_20181020T054710_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status                                      | The SWH and Ocean Averaging Status Flags have been set for one or more records.         |
| CS_OFFL_SIR_GOP_220181020T054710_20181020T063646_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status                                      | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records.      |
| CS_OFFL_SIR_GOP_220181020T063646_20181020T072624_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status                                      | The SWH and Ocean Averaging Status Flags have been set for one or more records.         |
| CS_OFFL_SIR_GOP_220181020T072624_20181020T081559_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status                                      | The SWH and Ocean Averaging Status Flags have been set for one or more records.         |
| CS_OFFL_SIR_GOP_220181020T081559_20181020T090537_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status                                      | The SWH and Ocean Averaging Status Flags have been set for one or more records.         |
| CS_OFFL_SIR_GOP_220181020T090537_20181020T095513_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status                                      | The SWH and Ocean Averaging Status Flags have been set for one or more records.         |
| CS_OFFL_SIR_GOP_220181020T095513_20181020T104451_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T104451_20181020T113426_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status                                      | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records.      |
| CS_OFFL_SIR_GOP_220181020T113426_20181020T122404_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T122404_20181020T131340_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T131340_20181020T140318_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T140318_20181020T145254_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status                                      | The SWH and Ocean Averaging Status Flags have been set for one or more records.         |
| CS_OFFL_SIR_GOP_220181020T145254_20181020T154232_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T154232_20181020T163207_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status                                      | The SWH and Ocean Averaging Status Flags have been set for one or more records.         |
| CS_OFFL_SIR_GOP_220181020T163207_20181020T172145_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T172145_20181020T181121_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status                                      | The SWH and Ocean Averaging Status Flags have been set for one or<br>more records.      |
| CS_OFFL_SIR_GOP_220181020T181121_20181020T190059_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T190059_20181020T195034_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T195034_20181020T204012_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T204012_20181020T212948_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T212948_20181020T221926_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T221926_20181020T230901_C001 | SWH Averaging Status, Ocean<br>Backscatter Averaging Status, Ice<br>Backscatter Averaging Status | The SWH, Ocean and Ice Averaging Status Flags have been set for one<br>or more records. |
| CS_OFFL_SIR_GOP_220181020T230901_20181020T235839_C001 | SWH Averaging Status, Ocean<br>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: 28

| Product  | Test Failed                   | Description   |
|--|-------------------------------|---|
| CS_OFFL_SIR_GOP_220181019T235951_20181020T004929_C002  | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T004929_20181020T013905_C001  | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T013905_20181020T022843_C001  | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T022843_20181020T031819_C001  | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T031819_20181020T040757_C001  | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T040757_20181020T045732_C001  | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T045732_20181020T054710_C001  | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_2_20181020T054710_20181020T063646_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |

| CS_OFFL_SIR_GOP_220181020T063646_20181020T072624_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
|---|-------------------------------|---|
| CS_OFFL_SIR_GOP_220181020T072624_20181020T081559_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T081559_20181020T090537_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T090537_20181020T095513_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T095513_20181020T104451_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T104451_20181020T113426_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T113426_20181020T122404_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T122404_20181020T131340_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T131340_20181020T140318_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T140318_20181020T145254_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T145254_20181020T154232_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T163207_20181020T172145_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T172145_20181020T181121_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T181121_20181020T190059_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T190059_20181020T195034_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T195034_20181020T204012_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T204012_20181020T212948_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T212948_20181020T221926_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T221926_20181020T230901_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
| CS_OFFL_SIR_GOP_220181020T230901_20181020T235839_C001 | Ocean Retracking Quality Flag | The Ocean Retracking Quality Flag has been set for one or more records. |
|   |                               | ·   |