







1. Overview

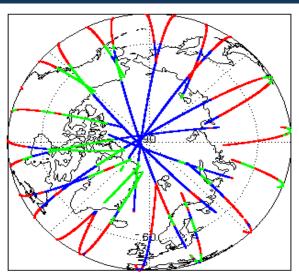
Report Production:	13-May-2019	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Near Real Time Ocean Products (NOP) L1B & L2 Science Data	

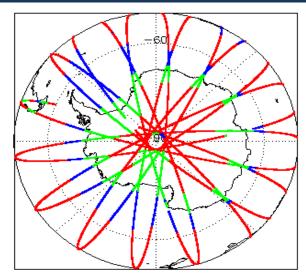
Check	L1 & L2
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	Nominal
Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5
Range, SWH & Backscatter Measurement Check	See Section 5.6, 5.7
Ocean Retracking Quality Check	See Section 5.8

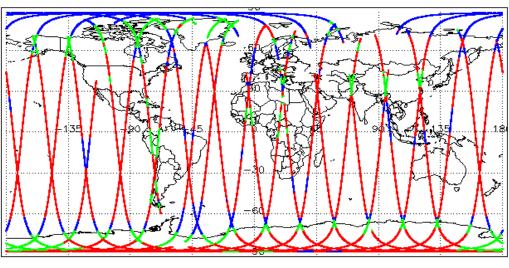
Mission / Instrument New		
	09-May-2019	None

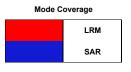
10-May-2019 None 11-May-2019 Nothing planned

2. Global Coverage









3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

4. NOP 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:

0

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.

4.3 L1B Auxilary Data File Usage Check

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

Dynamic Atmospheric Correction: The DAC is missing in all products because the auxiliary files required are not available in time for processing. This known and expected behaviour.

Number of products with errors:

4.4 L1B Auxiliary Correction Error Check

CryoSat L1B data includes a correction error flag for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

4.5 L1B Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag for each measurement record. The bit value of this flag indicates any problems when set.

Attitude Correction Missing: This flag is currently set in error for NOPR products due to a configuration issue. This is being investigated and will be updated in the next SW update.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20190510T021016_20190510T021806_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.

Number of products with errors: 2

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20190510T005827_20190510T011346_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190510T011547_20190510T012511_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190510T143143_20190510T143456_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190510T182719_20190510T184648_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190510T032131_20190510T032723_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190510T064344_20190510T064742_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190510T095321_20190510T095517_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190510T122738_20190510T122935_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190510T131121_20190510T131335_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190510T144659_20190510T145211_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190510T180240_20190510T180726_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190510T231240_20190510T231616_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190510T014531_20190510T015004_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190510T015122_20190510T015157_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190510T063349_20190510T064344_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190510T095517_20190510T100301_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190510T113421_20190510T114136_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190510T130348_20190510T130624_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190510T130745_20190510T131118_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190510T144451_20190510T144658_C001	Loss of Echo	The tracking echo is missing for one or more records

5. NOP 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).

Number of products with errors:

5.2 L2 Product Header Analysis

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

Number of products with errors: 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).

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_20190510T021016_20190510T021806_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.

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

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

Number of products with errors:

7/

Product	Test Failed	Description The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T000834_20190510T002552_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T002735_20190510T004145_C001	Ocean Range Averaging Status	records.
CS_OFFL_SIR_NOPM_2_20190510T005227_20190510T005629_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T005827_20190510T011346_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T011547_20190510T012511_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T014324_20190510T014422_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T015157_20190510T020434_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T021016_20190510T021806_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T021936_20190510T022337_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T022724_20190510T023531_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T023805_20190510T025314_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS OFFL SIR NOPM 2 20190510T032944 20190510T034020 C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T034023_20190510T040259_C001	Ocean Range Averaging Status	records. The Ocean 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
CS_OFFL_SIR_NOPM_2_20190510T040606_20190510T040812_C001		records. The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T040846_20190510T041412_C001	Ice Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T041743_20190510T044202_C001	Ocean Range Averaging Status	records.
CS_OFFL_SIR_NOPM_2_20190510T051514_20190510T052515_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T053052_20190510T054145_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T054814_20190510T055415_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T055606_20190510T062425_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T063237_20190510T063349_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T064742_20190510T072038_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T072723_20190510T073252_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T073514_20190510T074042_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T081144_20190510T081439_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T082632_20190510T090019_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T090624_20190510T091139_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T091435_20190510T093320_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T095122_20190510T095132_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T100506_20190510T103836_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T104201_20190510T104625_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS OFFL SIR NOPM 2 20190510T105450 20190510T105725 C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T105728_20190510T112858_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T114529_20190510T115604_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS OFFL SIR NOPM 2 20190510T120046 20190510T121809 C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T122006_20190510T122523_C001	Ice Range Averaging Status	records. The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T123552_20190510T124903_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
		records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T125118_20190510T130348_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T133041_20190510T134105_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190510T134244_20190510T135656_C001	Ocean Range Averaging Status	records.
CS_OFFL_SIR_NOPM_2_20190510T135932_20190510T140434_C001	Ice Range Averaging Status	The loe Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T141307_20190510T141406_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T142016_20190510T142518_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T143143_20190510T143456_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190510T143619_20190510T144329_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.

CS_OFFL_SIR_NOPM_2_20190510T153952_20190510T161605_C001 CS_OFFL_SIR_NOPM_2_20190510T155029_20190510T161605_C001 CS_OFFL_SIR_NOPM_2_20190510T165046_20190510T171545_C001 CS_OFFL_SIR_NOPM_2_20190510T165046_20190510T171545_C001 CS_OFFL_SIR_NOPM_2_20190510T171740_20190510T172304_C001 CS_OFFL_SIR_NOPM_2_20190510T173007_20190510T174106_C001 CS_OFFL_SIR_NOPM_2_20190510T173007_20190510T174106_C001 CS_OFFL_SIR_NOPM_2_20190510T17404_20190510T174106_C001 CS_OFFL_SIR_NOPM_2_20190510T17404_20190510T180240_C001 CS_OFFL_SIR_NOPM_2_20190510T182719_20190510T180240_C001 CS_OFFL_SIR_NOPM_2_20190510T182719_20190510T184648_C001 CS_OFFL_SIR_NOPM_2_20190510T184931_20190510T185509_C001 CS_OFFL_SIR_NOPM_2_20190510T185741_20190510T190542_C001 CS_OFFL_SIR_NOPM_2_20190510T189921_20190510T194258_C001 CS_OFFL_SIR_NOPM_2_20190510T190921_20190510T194258_C001 CS_OFFL_SIR_NOPM_2_20190510T1203411_C001 CS_OFFL_SIR_NOPM_2_20190510T203415_20190510T203431_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T2034230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SI	
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CS_OFFL_SIR_NOPM_2_20190510T174644_20190510T180240_C001 CS_OFFL_SIR_NOPM_2_20190510T182719_20190510T184648_C001 CS_OFFL_SIR_NOPM_2_20190510T182719_20190510T184648_C001 CS_OFFL_SIR_NOPM_2_20190510T184931_20190510T185509_C001 CS_OFFL_SIR_NOPM_2_20190510T185741_20190510T190542_C001 CS_OFFL_SIR_NOPM_2_20190510T185741_20190510T194258_C001 CS_OFFL_SIR_NOPM_2_20190510T190921_20190510T194258_C001 CS_OFFL_SIR_NOPM_2_20190510T190921_20190510T194258_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001	
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CS_OFFL_SIR_NOPM_2_20190510T184931_20190510T18509_C001 CS_OFFL_SIR_NOPM_2_20190510T184931_20190510T190542_C001 CS_OFFL_SIR_NOPM_2_20190510T190510T190542_C001 CS_OFFL_SIR_NOPM_2_20190510T190921_20190510T194258_C001 CS_OFFL_SIR_NOPM_2_20190510T190921_20190510T194258_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001	re
CS_OFFL_SIR_NOPM_2_20190510T184931_20190510T190542_C001 CS_OFFL_SIR_NOPM_2_20190510T185741_20190510T190542_C001 CS_OFFL_SIR_NOPM_2_20190510T190921_20190510T194258_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001	re
CS_OFFL_SIR_NOPM_2_20190510T190512_20190510T190542_C001 CS_OFFL_SIR_NOPM_2_20190510T190921_20190510T194258_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 Ice Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or m records. The Ocean Range Averaging Status Flag has been set for one or m records. The Ice Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPM_2_20190510T19092T_20190510T194258_C001 CS_OFFL_SIR_NOPM_2_20190510T201848_20190510T203411_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 Ice Range Averaging Status records. The Ocean Range Averaging Status Flag has been set for one or more records. The lee Range Averaging Status Flag has been set for one or more records.	
CS_OFFL_SIR_NOPM_2_201905101201848_201905101203411_C001 CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 Ice Range Averaging Status records. The Ice Range Averaging Status Flag has been set for one or more records.	re
CS_OFFL_SIR_NOPM_2_Z01905101203715_201905101204230_C001 lice Range Averaging Status records.	re
The Ocean Pange Averaging Status Flor has been set for one or m	
CS_OFFL_SIR_NOPM_2_20190510T204906_20190510T211045_C001 Ocean Range Averaging Status Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one of the ocean Range Averaging Status Flag has been set for one of the ocean Range Averaging Status.	re
CS_OFFL_SIR_NOPM_2_20190510T211330_20190510T212254_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPM_2_20190510T213426_20190510T213908_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPM_2_20190510T215338_20190510T215936_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPM_2_20190510T220124_20190510T221221_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPM_2_20190510T221845_20190510T222131_C001	
CS_OFFL_SIR_NOPM_2_20190510T222831_20190510T230132_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPM_2_20190510T231656_20190510T231703_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPM_2_20190510T231742_20190510T232434_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPM_2_20190510T232451_20190510T234907_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPM_2_20190510T235843_20190511T000038_C001	
CS_OFFL_SIR_NOPN_2_20190510T014423_20190510T014531_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPN_2_20190510T045457_20190510T045522_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPR_2_20190510T040259_20190510T040419_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPR_2_20190510T063042_20190510T063237_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re
CS_OFFL_SIR_NOPR_2_20190510T184648_20190510T184930_C001 Ocean Range Averaging Status The Ocean Range Averaging Status Flag has been set for one or m records.	re

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.

Test Failed Description

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.

Number of products with errors:

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

The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_NOPM_2_20190510T040846_20190510T041412_C001 Ice Backscatter Averaging Status SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T041743_20190510T044202_C001_ Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T051514_20190510T052515_C001 Backscatter Averaging Status more records. SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T053052_20190510T054145_C001 Backscatter Averaging Status more records. The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190510T054814 20190510T055415 C001 Ice Backscatter Averaging Status records. SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T055606_20190510T062425_C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T063237 20190510T063349 C001 Backscatter Averaging Status more records. SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T064742 20190510T072038 C001 **Backscatter Averaging Status** more records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_NOPM_2_20190510T072723_20190510T073252_C001 Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T073514 20190510T074042 C001 Backscatter Averaging Status The SWH and Ocean Averaging Status Flags have been set for one or SWH Averaging Status, Ocean CS OFFL SIR NOPM 2 20190510T081144 20190510T081439 C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T082632_20190510T090019_C001 Backscatter Averaging Status more records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190510T090624 20190510T091139 C001 Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T091435_20190510T093320_C001 Backscatter Averaging Status more records. SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T100506_20190510T103836_C001 Backscatter Averaging Status more records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190510T104201 20190510T104625 C001 Ice Backscatter Averaging Status ecords SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T105450 20190510T105725 C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T105728_20190510T112858_C001 Backscatter Averaging Status SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T114529_20190510T115604_C001_ Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T120046_20190510T121809_C001 Backscatter Averaging Status more records. The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_NOPM_2_20190510T122006_20190510T122523_C001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR NOPM 2 20190510T122542 20190510T122738 C001 Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T123552 20190510T124903 C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T125118 20190510T130348 C001 Backscatter Averaging Status SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T133041 20190510T134105 C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T134244 20190510T135656 C001 Backscatter Averaging Status more records. The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_NOPM_2_20190510T135932_20190510T140434_C001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more Ice Backscatter Averaging Status CS_OFFL_SIR_NOPM_2_20190510T140441_20190510T140452_C001 records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T142016_20190510T142518_C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T143143 20190510T143456 C001 Backscatter Averaging Status SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T143619_20190510T144329_C001 Backscatter Averaging Status more records. SWH Averaging Status, Ocean Backscatter Averaging Status The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T151506_20190510T153536_C001 more records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR NOPM_2_20190510T153952_20190510T154351_C001 Ice Backscatter Averaging Status The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_NOPM_2_20190510T154412_20190510T154624_C001 Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T155029_20190510T161605_C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T165046 20190510T171545 C001 Backscatter Averaging Status more records. The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_NOPM_2_20190510T171740_20190510T172304_C001 Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T173007_20190510T174106_C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T174644 20190510T180240 C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T182719 20190510T184648 C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T184931_20190510T185509_C001 Backscatter Averaging Status The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_NOPM_2_20190510T185741_20190510T190542_C001 Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T190921_20190510T194258_C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T201848 20190510T203411 C001 Backscatter Averaging Status more records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_NOPM_2_20190510T203715_20190510T204230_C001 Ice Backscatter Averaging Status records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T204906_20190510T211045_C001 Backscatter Averaging Status more records. SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T211330 20190510T212254 C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T213426_20190510T213908_C001 Backscatter Averaging Status more records. SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS_OFFL_SIR_NOPM_2_20190510T215338_20190510T215936_C001 Backscatter Averaging Status more records SWH Averaging Status, Ocean The SWH and Ocean Averaging Status Flags have been set for one or CS OFFL SIR NOPM 2 20190510T220124 20190510T221221 C001 **Backscatter Averaging Status** more records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_NOPM_2_20190510T221845_20190510T222131_C001 Ice Backscatter Averaging Status records

CS_OFFL_SIR_NOPM_2_20190510T222831_20190510T230132_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_20190510T231742_20190510T232434_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_20190510T232451_20190510T234907_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_20190510T235843_20190511T000038_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190510T014423_20190510T014531_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_20190510T045457_20190510T045522_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_20190510T040259_20190510T040419_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_20190510T063042_20190510T063237_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_20190510T184648_20190510T184930_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.

5.8 L2 Ocean Retracking Quality Check

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

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

Number of products with errors:

01