1. Overview

Report Production Date:	21-Apr-2016
Processor Used:	CryoSat Ocean Processor
Data Used:	Geophysical Ocean Products (GOP) L1B and L2 Science Data

Check	Status
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	**See Section 5.4**
Measurement Confidence Data Check	**See Section 4.5, 4.6, 5.5, 5.6, 5.7 and 5.8**

Mission / Instrument News	
23-Mar-2016	None
24-Mar-2016	None
25-Mar-2016	Nothing planned

2. Global Coverage

Global Coverage - North Pole

Global Coverage - South Pole

Mode Coverage	
(red)	LRM
(blue)	SAR
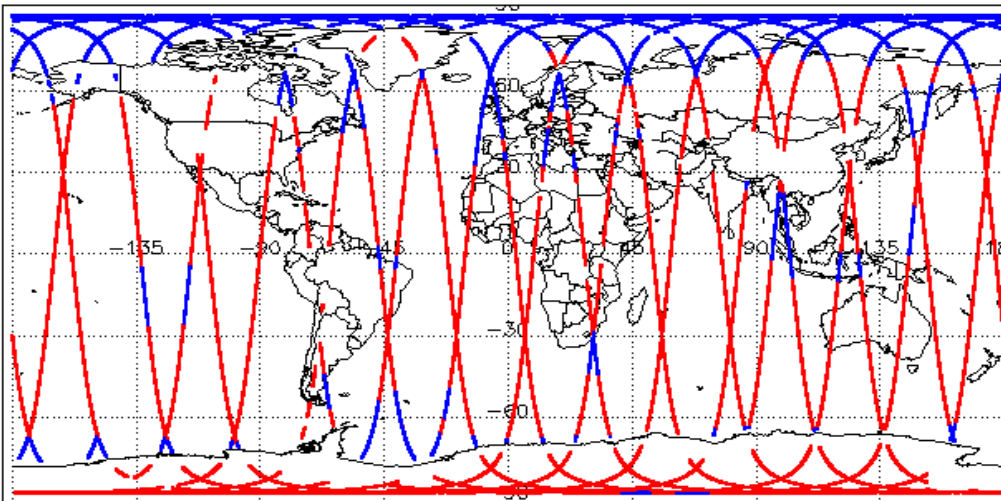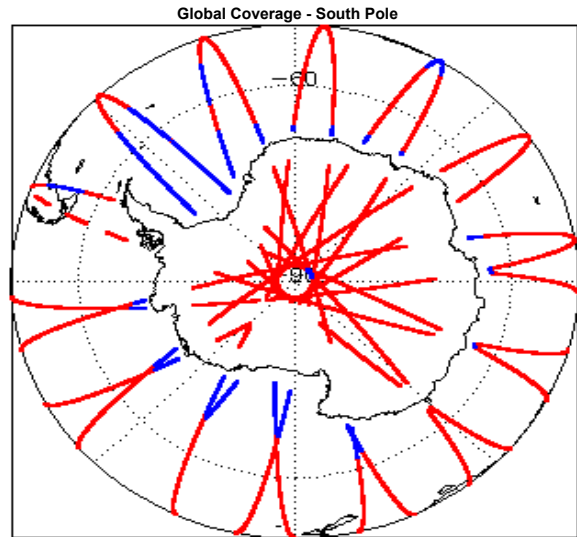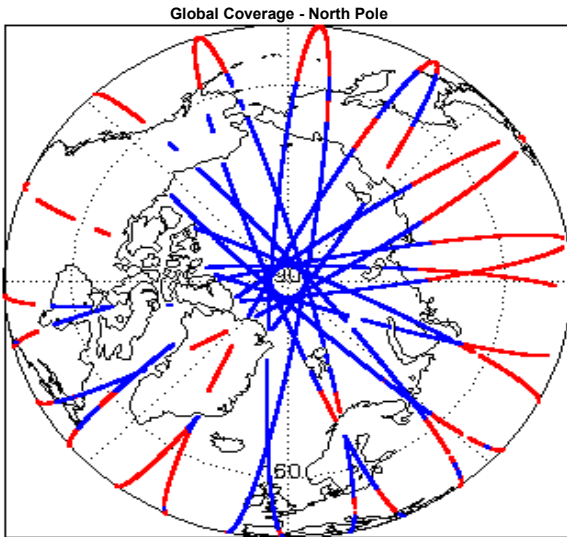
3. Instrument Configuration

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

SIRAL instrument(s) in use:	**SIRAL - A**

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 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.

Number of products with errors: 0

4.3 L1B Auxilary Data File Usage Check

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

Number of products with errors: 0

4.4 L1B Auxiliary Correction Error Check

CryoSat L1B data includes a correction error flag (field 60) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 0

4.5 L1B Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag (field 12) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 2

Product	Test Failed	Description
CS_OFFL_SIR_GOP_1B_20160324T051426_20160324T051533_B001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOP_1B_20160324T160554_20160324T161117_B001	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 (field 65) 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: 13

Product	Test Failed	Description
CS_OFFL_SIR_GOP_1B_20160324T045817_20160324T050648_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T050742_20160324T050836_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T081856_20160324T082426_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T093706_20160324T094628_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T131638_20160324T131736_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T133755_20160324T134627_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T141643_20160324T144608_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T162244_20160324T162333_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T162339_20160324T162413_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T180629_20160324T181512_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T181620_20160324T182625_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T230606_20160324T230822_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20160324T231333_20160324T232028_B001	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 product file (.DBL).

Number of products with errors: 0

5.2 L2 Product Header Analysis

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

Number of products with errors: 0

5.3 L2 Auxiliary Data File Usage Check

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

Wind Model File Usage: This file is currently not included in all L2 products.

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).

Currently, there are two common auxiliary correction errors 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.

Sea State Bias Error: The error value is currently set for products over land and sea ice, but this is to be expected.

Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

Number of products with errors: 13

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2__20160324T051040_20160324T051426_B001	Total Geocentric Ocean Tide (FES)	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records
CS_OFFL_SIR_GOP_2__20160324T064851_20160324T065904_B001	Total Geocentric Ocean Tide (FES)	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records
CS_OFFL_SIR_GOP_2__20160324T093706_20160324T094628_B001	Total Geocentric Ocean Tide (FES)	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records
CS_OFFL_SIR_GOP_2__20160324T100803_20160324T101208_B001	Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT and solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_2__20160324T131400_20160324T131622_B001	Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2__20160324T141643_20160324T144608_B001	Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_2__20160324T145206_20160324T145432_B001	Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_2__20160324T180629_20160324T181512_B001	Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_2__20160324T181620_20160324T182626_B001	Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_2__20160324T182626_20160324T190005_B001	Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_2__20160324T202347_20160324T203942_B001	Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_2__20160324T213450_20160324T214209_B001	Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_2__20160324T230121_20160324T230137_B001	Total Geocentric Ocean Tide (FES)	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records

5.5 L2 Measurement Confidence Data Check

CryoSat L2 data includes a measurement confidence flag (field 14) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 2

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2__20160324T051426_20160324T051533_B001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_2__20160324T160554_20160324T161117_B001	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 (field 25) and Ice (field 30) 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: 33

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2__20160324T005216_20160324T005550_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T005557_20160324T005606_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T005612_20160324T005934_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T022959_20160324T023504_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T023511_20160324T023838_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T040957_20160324T041536_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T041649_20160324T041738_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T054921_20160324T055430_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T073127_20160324T073333_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T091043_20160324T091242_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T091358_20160324T091744_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T100436_20160324T100557_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T104856_20160324T105646_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T122719_20160324T122932_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T122948_20160324T123537_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T140642_20160324T140756_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T140929_20160324T141354_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T154839_20160324T155417_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T163601_20160324T164348_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T172743_20160324T173255_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T190513_20160324T190742_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T190742_20160324T190749_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T190749_20160324T190756_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T190759_20160324T191159_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T195220_20160324T195423_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T204121_20160324T204641_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T204641_20160324T204647_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.

CS_OFFL_SIR_GOP_2__20160324T204647_20160324T204653_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T204654_20160324T204700_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T204700_20160324T204903_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T222046_20160324T222552_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T222552_20160324T222558_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T222616_20160324T222731_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.

5.7 L2 SWH and Backscatter Measurement Check

CryoSat L2 data includes a SWH Averaging Status flag (field 49) and an Ocean (field 55) and Ice (field 61) Backscatter Averaging Status flag for each measurement record. The bit value of this flag indicates any problems when set.

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

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

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

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

Number of products with errors: 28

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2__20160324T005216_20160324T005550_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T005612_20160324T005934_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T022959_20160324T023504_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T023511_20160324T023838_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T040957_20160324T041536_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T041649_20160324T041738_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T054921_20160324T055430_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T073127_20160324T073333_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T091043_20160324T091242_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T091358_20160324T091744_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T104856_20160324T105646_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T122719_20160324T122932_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T122948_20160324T123537_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T140642_20160324T140756_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T140929_20160324T141354_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T154839_20160324T155417_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T163601_20160324T164348_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T172743_20160324T173255_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T190513_20160324T190742_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T190742_20160324T190749_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T190749_20160324T190756_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T190759_20160324T191159_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T195220_20160324T195423_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T204121_20160324T204641_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T204654_20160324T204700_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T204700_20160324T204903_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T222046_20160324T222552_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2__20160324T222616_20160324T222731_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.

5.8 L2 Ocean Retracking Quality Check

CryoSat L2 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: 143