



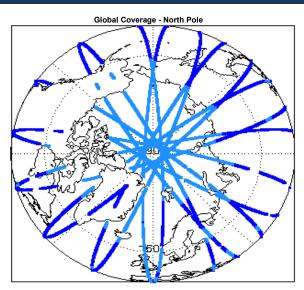
# 1. Overview

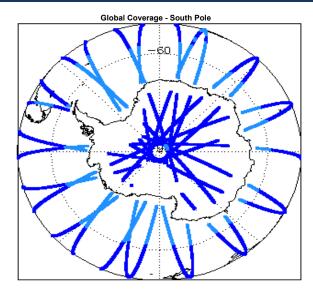
Report Production Date:	03-Dec-2015
Processor Used:	CryoSat Ocean Processor
Data Used:	Geophysical Ocean Products (GOP) L1B and L2 Science Data

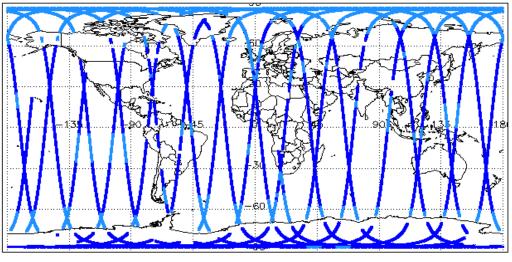
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	See Section 5.4
Measurement Confidence Data Check	See Section 4.5, 4.6, 5.5, 5.6, 5.7 and 5.8

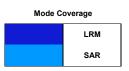
Mission / Instrument News		
02-Nov-2015	None	
03-Nov-2015	SIRAL unavailability on 03-Nov-2015 from 18:42:12 to 19:39:43 due to a planned orbit manoeuvre.	
04-Nov-2015	Nothing planned	

# 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. 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.

#### 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:

#### 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:

#### 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:

4

Product	Test Failed	Description
CS_OFFL_SIR_GOP_1B_20151103T060400_20151103T060706_B001		There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOP_1B_20151103T081342_20151103T081659_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_20151103T180341_20151103T181050_B001		There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOP_1B_20151103T220928_20151103T223006_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.

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Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOP_1B_20151103T010853_20151103T011458_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20151103T011843_20151103T012757_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20151103T021529_20151103T021917_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20151103T035312_20151103T040010_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20151103T043715_20151103T044426_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20151103T045410_20151103T050344_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20151103T055407_20151103T055830_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20151103T202750_20151103T203016_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20151103T223649_20151103T223846_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20151103T224507_20151103T224616_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOP_1B_20151103T224748_20151103T225543_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:

### 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:

# 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:

#### 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: 17

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20151103T010853_20151103T011458_B001		There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records
CS_OFFL_SIR_GOP_2_20151103T045244_20151103T045410_B001	Fauilibrium 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_20151103T075420_20151103T080259_B001	Fauilibrium 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_20151103T085131_20151103T085413_B001	For I of the Control	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_20151103T095120_20151103T101720_B001		There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records

CS_OFFL_SIR_GOP_220151103T103444_20151103T110703_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_20151103T111944_20151103T112239_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_220151103T112429_20151103T112812_B001	Geoid Height	There is an error with the Geoid height for one or more records
CS_OFFL_SIR_GOP_2_20151103T154731_20151103T154838_B001	Total Geocentric Ocean Tide (FES), Non-	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_220151103T162148_20151103T163722_B001	Mean Sea Surface (2)	There is an error with the MSS height (solution 2) for one or more records
CS_OFFL_SIR_GOP_2_20151103T164341_20151103T165509_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_20151103T171041_20151103T172506_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_220151103T174828_20151103T174920_B001		There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records
CS_OFFL_SIR_GOP_2_20151103T180024_20151103T180218_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_220151103T181212_20151103T181700_B001		There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records
CS_OFFL_SIR_GOP_220151103T223015_20151103T223649_B001	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_220151103T223649_20151103T223846_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

### 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:

4

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20151103T060400_20151103T060706_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_20151103T081342_20151103T081659_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_20151103T180341_20151103T181049_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_20151103T220928_20151103T223006_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:

Product	Test Failed	Description
CS_OFFL_SIR_GOP_220151103T003005_20151103T003516_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T020739_20151103T021004_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T021010_20151103T021421_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T025452_20151103T025647_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T034344_20151103T034902_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T034909_20151103T034915_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T034915_20151103T034921_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T034921_20151103T035125_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T052309_20151103T052813_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T052814_20151103T052820_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T052820_20151103T052831_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T052838_20151103T052953_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T070258_20151103T070730_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T070751_20151103T070924_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T084125_20151103T084643_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T084650_20151103T085014_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T102108_20151103T102920_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T120049_20151103T120610_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20151103T125814_20151103T125827_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.

CS_OFFL_SIR_GOP_2_20151103T134122_20151103T134509_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T152222_20151103T152415_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T152713_20151103T152846_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T170108_20151103T170329_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T170402_20151103T170824_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T183855_20151103T184212_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T201810_20151103T201958_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T202057_20151103T202531_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T215739_20151103T215743_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T220014_20151103T220606_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_220151103T233920_20151103T234438_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:

CS_OFFL_SIR_GOP_2_20151103T003002_00_2151103T021004_8001  CS_OFFL_SIR_GOP_2_20151103T021010_20151103T021421_8001  CS_OFFL_SIR_GOP_2_20151103T02452_20151103T02547_8001  CS_OFFL_SIR_GOP_2_20151103T034542_20151103T02547_8001  CS_OFFL_SIR_GOP_2_2015103T03452_20151103T034915_8001  CS_OFFL_SIR_GOP_2_2015103T034909_20151103T034915_8001  CS_OFFL_SIR_GOP_2_2015103T034909_20151103T034915_8001  CS_OFFL_SIR_GOP_2_2015103T034909_20151103T034915_8001  CS_OFFL_SIR_GOP_2_2015103T034909_20151103T034915_8001  CS_OFFL_SIR_GOP_2_2015103T034909_20151103T034915_8001  CS_OFFL_SIR_GOP_2_2015103T034909_20151103T034915_8001  CS_OFFL_SIR_GOP_2_2015103T034909_2015103T034915_8001  CS_OFFL_SIR_GOP_2_2015103T03209_20151103T032913_8001  CS_OFFL_SIR_GOP_2_2015103T03209_20151103T03293_8001  CS_OFFL_SIR_GOP_2_2015103T03209_20151103T03293_8001  CS_OFFL_SIR_GOP_2_2015103T03703283_20151103T037030_8001  CS_OFFL_SIR_GOP_2_2015103T0370358_20151103T037030_8001  CS_OFFL_SIR_GOP_2_2015103T03703703_8001  CS_OFFL_SIR_GOP_2_20151103T070751_20151103T070704_8001  CS_OFFL_SIR_GOP_2_20151103T070751_20151103T070924_8001  CS_OFFL_SIR_GOP_2_20151103T094605_20151103T084643_8001  CS_OFFL_SIR_GOP_2_20151103T08465_20151103T084643_8001  CS_OFFL_SIR_GOP_2_20151103T02009_20151103T102009	Product	Test Failed	Description
CS_OFF_SIR_GOP_2_2015103T02402_8015103T02442_8001  IDES Backscatter Averaging Status  The loce B	CS_OFFL_SIR_GOP_220151103T003005_20151103T003516_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
Les Backscatter Averaging Status  Free Coords.  CS_OFFL_SIR_GOP_2_20151103702492_20151103702564P_B001  Les Backscatter Averaging Status  Free Coords.  CS_OFFL_SIR_GOP_2_201511037004902_20151037034915_B001  Les Backscatter Averaging Status  Free Coords.  CS_OFFL_SIR_GOP_2_201511037004902_20151037034915_B001  Les Backscatter Averaging Status  Free Coords.  CS_OFFL_SIR_GOP_2_201511037004921_201511037052125_B001  Les Backscatter Averaging Status  Free Coords.  CS_OFFL_SIR_GOP_2_201511037004921_201511037052813_B001  Les Backscatter Averaging Status  Free Coords.  CS_OFFL_SIR_GOP_2_2015110370052832_201511037052953_B001  Les Backscatter Averaging Status  Les Backscatter Averaging Stat	CS_OFFL_SIR_GOP_2_20151103T020739_20151103T021004_B001	Ice Backscatter Averaging Status	
CS_OFFL_SIR_GOP_2_201511037034909_201511037034915_8001  Lob Backscatter Averaging Status  Lob Backscatter Av	CS_OFFL_SIR_GOP_220151103T021010_20151103T021421_B001	Ice Backscatter Averaging Status	
to Backscatter Averaging Status  The Ice Backscatter Averaging Status Flag has been set for one or more records.  CS_OFFL_SIR_GOP_2_20151103T052392_0151103T052953_B001  Ice Backscatter Averaging Status  Ice Bac	CS_OFFL_SIR_GOP_220151103T025452_20151103T025647_B001	Ice Backscatter Averaging Status	* * *
CS_OFFL_SIR_GOP_2_20151103T052399_20151103T052813_B001  CS_OFFL_SIR_GOP_2_20151103T052838_20151103T052953_B001  CS_OFFL_SIR_GOP_2_20151103T052838_20151103T070730_B001  CS_OFFL_SIR_GOP_2_20151103T070751_20151103T070730_B001  CS_OFFL_SIR_GOP_2_20151103T070751_20151103T070730_B001  CS_OFFL_SIR_GOP_2_20151103T070751_20151103T070730_B001  CS_OFFL_SIR_GOP_2_20151103T070751_20151103T070730_B001  CS_OFFL_SIR_GOP_2_20151103T084125_20151103T08443_B001  CS_OFFL_SIR_GOP_2_20151103T08450_20151103T084643_B001  CS_OFFL_SIR_GOP_2_20151103T084650_20151103T0805014_B001  CS_OFFL_SIR_GOP_2_20151103T0208_20151103T102920_B001  CS_OFFL_SIR_GOP_2_20151103T10208_20151103T102920_B001  CS_OFFL_SIR_GOP_2_20151103T12841_20151103T128610_B001  CS_OFFL_SIR_GOP_2_20151103T12841_20151103T128827_B001  CS_OFFL_SIR_GOP_2_20151103T12841_20151103T128827_B001  CS_OFFL_SIR_GOP_2_20151103T134122_20151103T134509_B001  CS_OFFL_SIR_GOP_2_20151103T134122_20151103T152846_B001  CS_OFFL_SIR_GOP_2_20151103T15273_20151103T152846_B001  CS_OFFL_SIR_GOP_2_20151103T1708_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T1708_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T1708_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T1708_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T1708_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T1708_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T1708_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T1708_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T1708_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T170825_S001	CS_OFFL_SIR_GOP_220151103T034909_20151103T034915_B001	Ice Backscatter Averaging Status	
cs_OFFL_SIR_GOP_2_20151103T052983_20151103T05295_B001  cs_Backscatter Averaging Status  cs_OFFL_SIR_GOP_2_20151103T070758_20151103T070730_B001  cs_Backscatter Averaging Status  cs_OFFL_SIR_GOP_2_20151103T070751_20151103T070730_B001  cs_Backscatter Averaging Status  cs_OFFL_SIR_GOP_2_20151103T070751_20151103T0707924_B001  cs_DFFL_SIR_GOP_2_20151103T084643_B001  cs_Backscatter Averaging Status  cs_OFFL_SIR_GOP_2_20151103T084652_20151103T084643_B001  cs_Backscatter Averaging Status  cs_OFFL_SIR_GOP_2_20151103T084652_20151103T085014_B001  cs_DFFL_SIR_GOP_2_20151103T084652_2015103T10290_B001  cs_Backscatter Averaging Status  cs_OFFL_SIR_GOP_2_20151103T102049_20151103T10290_B001  cs_Backscatter Averaging Status  cs_OFFL_SIR_GOP_2_20151103T12049_20151103T125827_B001  cs_Backscatter Averaging Status  cs_OFFL_SIR_GOP_2_20151103T134509_B001  cs_Backscatter Averaging Status  cs_OFFL_SIR_GOP_2_20151103T1352454_B001  cs_Backscatter Averaging Status  cs_OFFL_SIR_GOP_2_20151103T170402_20151103T170329_B001  cs_Backscatter Averaging Status  cs_OFFL_SIR_GOP_2_20151103T170402_20151103T170329_B001  cs_Backscatter Averaging Status  cs_DFL_SIR_GOP_2_20151103T170402_20151103T170329_B001  cs_Backscatter Averaging Status  cs_DFL_SIR_GOP_2_20151103T170402_20151103T170424_B001  cs_Backscatter Averaging Status  cs_DFL_SIR_GOP_2_20151103T103T201850_20151103T103E0850_B001  cs_Backscatter Averaging Status  cs_DFL_SIR_GOP_2_20151103T103T201850_20151103T103E0850_B001  cs_Backscatter Averaging Status  cs_DFL_SIR_GOP_2_20151103T103T201850_20151103T103E0850_B001  cs_Backscatter Averaging Status  cs_DFL_SIR_GOP_2_20151103T103T201850_20151103T201958_B001  cs_Backscatter Averaging Status  cs_DFL_SIR_GOP_2_20151103T103T201850_20151103T201958_B001  cs_Backscatter A	CS_OFFL_SIR_GOP_220151103T034921_20151103T035125_B001	Ice Backscatter Averaging Status	
CS_OFFL_SIR_GOP_2_20151103T02638_20151103T070730_B001  Ice Backscatter Averaging Status  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 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 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 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 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 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 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 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 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 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 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 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 Ice Backs	CS_OFFL_SIR_GOP_220151103T052309_20151103T052813_B001	Ice Backscatter Averaging Status	
CS_OFFL_SIR_GOP_2_20151103T070751_20151103T070924_B001  Ice Backscatter Averaging Status  Ice Backscatter Av	CS_OFFL_SIR_GOP_220151103T052838_20151103T052953_B001	Ice Backscatter Averaging Status	* * *
CS_OFFL_SIR_GOP_2_20151103T070751_20151103T0708463_B001  Loe Backscatter Averaging Status  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Bac	CS_OFFL_SIR_GOP_220151103T070258_20151103T070730_B001	Ice Backscatter Averaging Status	* * * * * * * * * * * * * * * * * * * *
CS_OFFL_SIR_GOP_2_20151103T084650_20151103T082057_20151103T084645_B001  Ice Backscatter Averaging Status  Ic	CS_OFFL_SIR_GOP_220151103T070751_20151103T070924_B001	Ice Backscatter Averaging Status	
CS_OFFL_SIR_GOP_2_20151103T102108_20151103T10290_B001  CS_OFFL_SIR_GOP_2_20151103T120049_20151103T10290_B001  CS_OFFL_SIR_GOP_2_20151103T120049_20151103T120610_B001  CS_OFFL_SIR_GOP_2_20151103T125814_20151103T125827_B001  Ice Backscatter Averaging Status  Ice Backscatter Averaging Status  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 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 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 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 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 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 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 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 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 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 Ice Backscatter Averaging Status Flag has been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set	CS_OFFL_SIR_GOP_220151103T084125_20151103T084643_B001	Ice Backscatter Averaging Status	
CS_OFFL_SIR_GOP_2_20151103T12049_20151103T120610_B001  CS_OFFL_SIR_GOP_2_20151103T125814_20151103T125827_B001  CS_OFFL_SIR_GOP_2_20151103T125814_20151103T125827_B001  CS_OFFL_SIR_GOP_2_20151103T134122_20151103T134509_B001  CS_OFFL_SIR_GOP_2_20151103T134122_20151103T134509_B001  CS_OFFL_SIR_GOP_2_20151103T152222_20151103T152415_B001  CS_OFFL_SIR_GOP_2_20151103T152222_20151103T152415_B001  CS_OFFL_SIR_GOP_2_20151103T152222_20151103T152846_B001  CS_OFFL_SIR_GOP_2_20151103T170108_20151103T170329_B001  CS_OFFL_SIR_GOP_2_20151103T170108_20151103T170329_B001  CS_OFFL_SIR_GOP_2_20151103T170108_20151103T170329_B001  CS_OFFL_SIR_GOP_2_20151103T170402_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T170402_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T170402_20151103T184212_B001  CS_OFFL_SIR_GOP_2_20151103T183855_20151103T184212_B001  CS_OFFL_SIR_GOP_2_20151103T201810_20151103T201958_B001  CS_OFFL_SIR_GOP_2_20151103T201810_20151103T202531_B001  CS_OFFL_SIR_GOP_2_20151103T202057_20151103T202531_B001  CS_OFFL_SIR_GOP_2_20151103T202531_B001  CS_OFFL_SIR_GOP_2_20151103T202531_B001  CS_OFFL_SIR_GOP_2_20151103T202531_B001  CS_OFFL_SIR_GOP_2_20151103T202531_B001  CS_OFFL_SIR_GOP_2_20151103T202531_B001  CS_OFFL_SIR_GOP_2_20151103T202531_B001  CS_OFFL_SIR_GOP	CS_OFFL_SIR_GOP_220151103T084650_20151103T085014_B001	Ice Backscatter Averaging Status	* * *
CS_OFFL_SIR_GOP_2_20151103T12049_20151103T125827_B001  Loe Backscatter Averaging Status  CS_OFFL_SIR_GOP_2_20151103T134122_20151103T134509_B001  Loe Backscatter Averaging Status  Loe Backscatter Averaging Status  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The loe Backscatter Averaging Status Flag has been	CS_OFFL_SIR_GOP_220151103T102108_20151103T102920_B001	Ice Backscatter Averaging Status	* * * * * * * * * * * * * * * * * * * *
CS_OFFL_SIR_GOP_2_20151103T125814_20151103T134509_B001  CS_OFFL_SIR_GOP_2_20151103T134122_20151103T134509_B001  CS_OFFL_SIR_GOP_2_20151103T152222_20151103T152415_B001  CS_OFFL_SIR_GOP_2_20151103T152222_20151103T152415_B001  CS_OFFL_SIR_GOP_2_20151103T152713_20151103T152846_B001  CS_OFFL_SIR_GOP_2_20151103T170108_20151103T170329_B001  CS_OFFL_SIR_GOP_2_20151103T170108_20151103T170329_B001  CS_OFFL_SIR_GOP_2_20151103T170402_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T170402_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T183855_20151103T184212_B001  CS_OFFL_SIR_GOP_2_20151103T201810_20151103T201958_B001  CS_OFFL_SIR_GOP_2_20151103T201810_20151103T201958_B001  CS_OFFL_SIR_GOP_2_20151103T202057_20151103T202531_B001  Ice Backscatter Averaging Status  records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The 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 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 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 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 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 Ice Backscatter Averaging Status Flag has been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.	CS_OFFL_SIR_GOP_220151103T120049_20151103T120610_B001	Ice Backscatter Averaging Status	
CS_OFFL_SIR_GOP_2_20151103T152222_20151103T152415_B001  Ice Backscatter Averaging Status  Ice Backscatter Averaging Status  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 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 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 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 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 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 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 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 Ice Backscatter Averaging Status Flag has been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.	CS_OFFL_SIR_GOP_220151103T125814_20151103T125827_B001	Ice Backscatter Averaging Status	
CS_OFFL_SIR_GOP_2_20151103T15222_20151103T152846_B001  CS_OFFL_SIR_GOP_2_20151103T152713_20151103T152846_B001  CS_OFFL_SIR_GOP_2_20151103T170108_20151103T170329_B001  CS_OFFL_SIR_GOP_2_20151103T170402_20151103T170329_B001  CS_OFFL_SIR_GOP_2_20151103T170402_20151103T170824_B001  CS_OFFL_SIR_GOP_2_20151103T183855_20151103T184212_B001  CS_OFFL_SIR_GOP_2_20151103T183855_20151103T184212_B001  CS_OFFL_SIR_GOP_2_20151103T201810_20151103T201958_B001  CS_OFFL_SIR_GOP_2_20151103T201810_20151103T201958_B001  CS_OFFL_SIR_GOP_2_20151103T202057_20151103T202531_B001  Ice Backscatter Averaging Status  Ice Backscatter Averaging Status  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 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 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 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 Ice Backscatter Averaging Status Flag has been set for one or more records.	CS_OFFL_SIR_GOP_220151103T134122_20151103T134509_B001	Ice Backscatter Averaging Status	* * *
CS_OFFL_SIR_GOP_2_20151103T170108_20151103T170329_B001  Ice Backscatter Averaging Status  records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The 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 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 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 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 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 Ice Backscatter Averaging Status Flag has been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.	CS_OFFL_SIR_GOP_220151103T152222_20151103T152415_B001	Ice Backscatter Averaging Status	* * * * * * * * * * * * * * * * * * * *
CS_OFFL_SIR_GOP_2_20151103T170108_20151103T170329_B001	CS_OFFL_SIR_GOP_220151103T152713_20151103T152846_B001	Ice Backscatter Averaging Status	
CS_OFFL_SIR_GOP_2_20151103T170402_20151103T170824_B001	CS_OFFL_SIR_GOP_220151103T170108_20151103T170329_B001	Ice Backscatter Averaging Status	* * * * * * * * * * * * * * * * * * * *
CS_OFFL_SIR_GOP_2_20151103T183855_20151103T184212_B001	CS_OFFL_SIR_GOP_220151103T170402_20151103T170824_B001	Ice Backscatter Averaging Status	* * *
CS_OFFL_SIR_GOP_2_201511031201810_201511031201958_B001	CS_OFFL_SIR_GOP_220151103T183855_20151103T184212_B001	Ice Backscatter Averaging Status	* * * * * * * * * * * * * * * * * * * *
cs_offic_sir_GoP_z_201511031202057_201511031202531_B001 lice Backscatter Averaging Status records.  The Ice Backscatter Averaging Status Flag has been set for one or more	CS_OFFL_SIR_GOP_220151103T201810_20151103T201958_B001	Ice Backscatter Averaging Status	
The Ice Backscatter Averaging Status Flag has been set for one or more	CS_OFFL_SIR_GOP_2_20151103T202057_20151103T202531_B001	Ice Backscatter Averaging Status	* * * * * * * * * * * * * * * * * * * *
CS_OFFL_SIR_GOP_2_20151103T220014_20151103T220606_B001	CS_OFFL_SIR_GOP_2_20151103T220014_20151103T220606_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_GOP_2_20151103T233920_20151103T234438_B001	CS_OFFL_SIR_GOP_2_20151103T233920_20151103T234438_B001	Ice Backscatter Averaging Status	

### 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: