

1. Overview

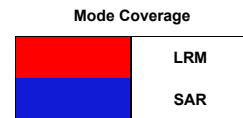
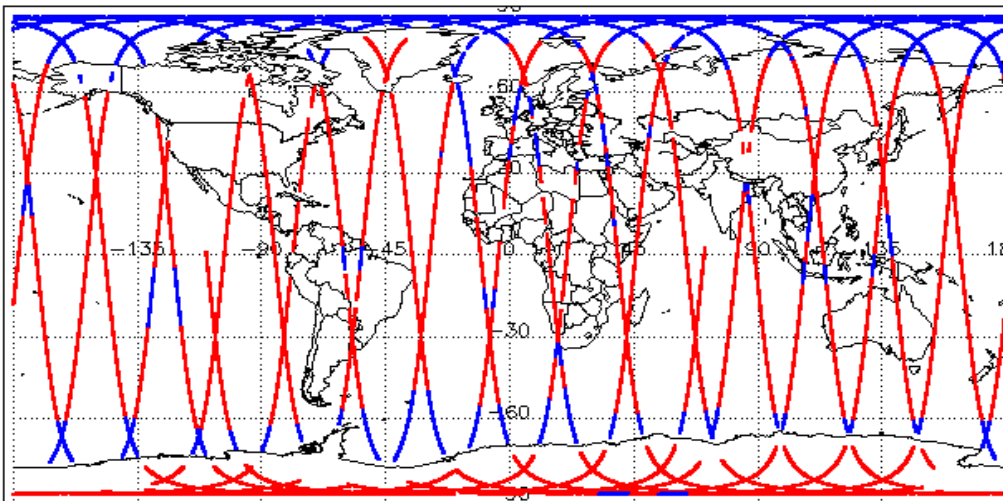
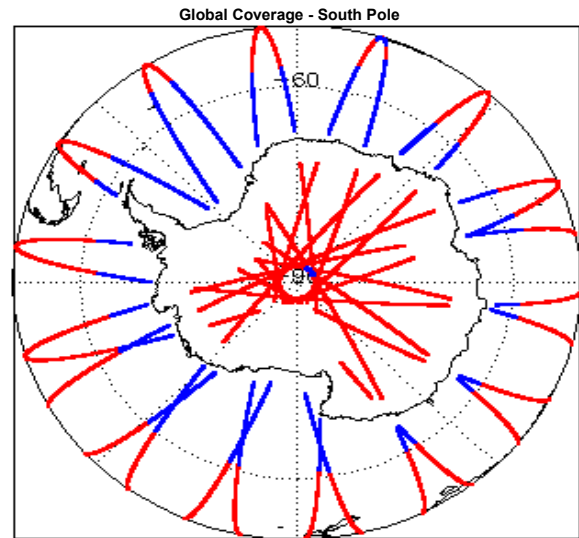
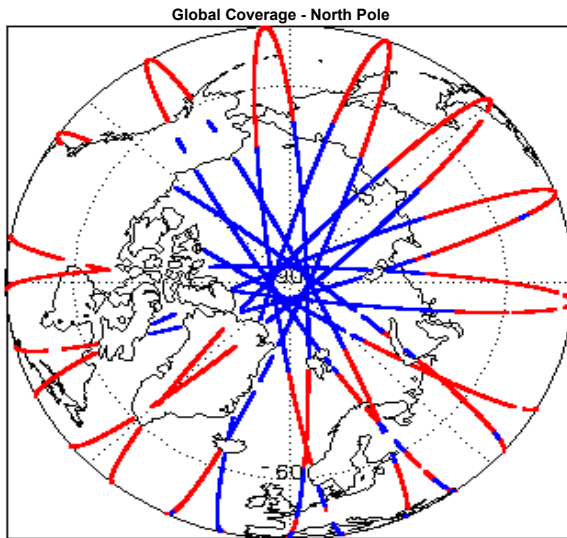
Report Production Date:	21-Aug-2017
Processor Used:	CryoSat Ocean Processor
Data Used:	Intermediate Ocean Products (IOP) L1B and L2 Science Data

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

17-Aug-2017	None
18-Aug-2017	None
19-Aug-2017	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
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4. IOP 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.

Number of products with errors: 0

4.3 L1B Auxiliary Data File Usage Check

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

Number of products with errors: 0

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: 4

Product	Test Failed	Description
CS_OFFL_SIR_IOP_1B_20170818T030315_20170818T030649_B001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOP_1B_20170818T111937_20170818T115313_B001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOP_1B_20170818T204206_20170818T205811_B001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOP_1B_20170818T222440_20170818T223843_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: 12

Product	Test Failed	Description
CS_OFFL_SIR_IOP_1B_20170818T003020_20170818T003244_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170818T025959_20170818T030055_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170818T042729_20170818T043630_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170818T060901_20170818T061512_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170818T065135_20170818T065834_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170818T073132_20170818T073903_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170818T134807_20170818T140727_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170818T141542_20170818T141729_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170818T175359_20170818T182857_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170818T192500_20170818T193040_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170818T210414_20170818T211111_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170818T224237_20170818T224754_B001	Loss of Echo	The tracking echo is missing for one or more records

5. IOP 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: 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_IOP_2_20170817T235246_20170818T001654_B001	GIM Ionospheric Correction	There is an error with the GIM Ionospheric correction for one or more records
CS_OFFL_SIR_IOP_2_20170818T012758_20170818T015613_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_IOP_2_20170818T110453_20170818T111227_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_IOP_2_20170818T123804_20170818T124436_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_IOP_2__20170818T134807_20170818T140727_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_IOP_2__20170818T152435_20170818T153006_B001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_IOP_2__20170818T155754_20170818T155928_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_IOP_2__20170818T175359_20170818T182857_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_IOP_2__20170818T193909_20170818T195128_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_IOP_2__20170818T195333_20170818T200822_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_IOP_2__20170818T204206_20170818T205811_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_IOP_2__20170818T222440_20170818T223843_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_IOP_2__20170818T224827_20170818T224943_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_IOP_2__20170818T030315_20170818T030649_B001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_IOP_2__20170818T111937_20170818T115313_B001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_IOP_2__20170818T204206_20170818T205811_B001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_IOP_2__20170818T222440_20170818T223843_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_IOP_2__20170818T002010_20170818T002531_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T002538_20170818T002902_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T015958_20170818T020809_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T033938_20170818T034457_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T052030_20170818T052357_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T070109_20170818T070303_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T070549_20170818T070740_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T075506_20170818T075921_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T083954_20170818T084218_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T084248_20170818T084711_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T101740_20170818T102622_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T115658_20170818T115844_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T115945_20170818T120415_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T133901_20170818T134453_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T151808_20170818T152324_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T165649_20170818T165809_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T165816_20170818T170224_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T183149_20170818T183707_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T183708_20170818T183713_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T183713_20170818T183720_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T183727_20170818T184010_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T191958_20170818T192405_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T201103_20170818T201605_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.

CS_OFFL_SIR_IOP_2__20170818T201612_20170818T201618_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T201619_20170818T201624_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T201644_20170818T201807_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T215016_20170818T215515_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T215515_20170818T215522_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T215523_20170818T215534_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T215557_20170818T215703_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T233101_20170818T233432_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T233439_20170818T233448_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T233454_20170818T233823_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: 25

Product	Test Failed	Description
CS_OFFL_SIR_IOP_2__20170818T002010_20170818T002531_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T002538_20170818T002902_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T015958_20170818T020809_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T033938_20170818T034457_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T052030_20170818T052357_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T070109_20170818T070303_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T070549_20170818T070740_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T083954_20170818T084218_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T084248_20170818T084711_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T101740_20170818T102622_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T115658_20170818T115844_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T115945_20170818T120415_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T133901_20170818T134453_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T151808_20170818T152324_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T165649_20170818T165809_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T165816_20170818T170224_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T183149_20170818T183707_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T183713_20170818T183720_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T183727_20170818T184010_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T191958_20170818T192405_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T201612_20170818T201618_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T201644_20170818T201807_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T215557_20170818T215703_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T233101_20170818T233432_B001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2__20170818T233454_20170818T233823_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: 151

6. IOP QCC Report Analysis

The Quality Control for CryoSat (QCC) facility performs a primary survey of data products immediately after production by the PDS and LTA processing facilities. A list of the tests which raised errors or warnings is provided below.

Product type	Nb. Products	Nb. QCC Reports	Nb. Valid	Nb. Warnings	Nb. Errors
SIR_IOP_1B	241	241	241	0	0
SIR_IOP_2	241	241	241	0	0

6.1 QCC Errors

Number of QCC reports with errors: 0

6.2 QCC Warnings

Number of QCC reports with warnings: 0

6.3 Missing QCC Reports

Number of products with missing QCC reports: 0
