



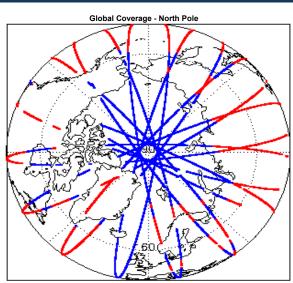
1. Overview

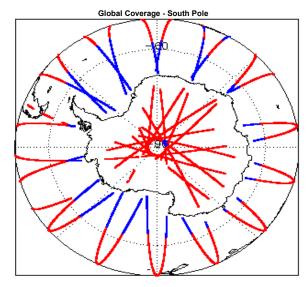
Report Production Date:	03-Jan-2017		
Processor Used:	CryoSat Ocean Processor		
Data Used:	Intermediate Ocean Products (IOP) L1B and L2 Science Data		

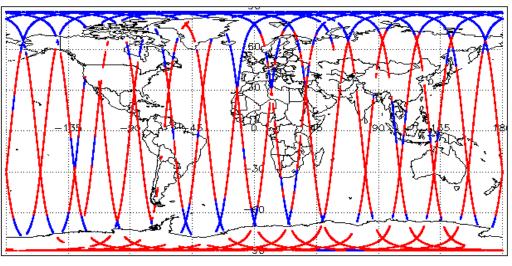
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	See Section 5.4
Measurement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

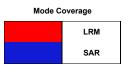
Mission / Instru	ment News
31-Dec-2016	None
01-Jan-2017	None
02-Jan-2017	Nothing planned

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

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.

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:

0

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:

15

Product	Test Failed	Description
CS_OFFL_SIR_IOP_1B_20170101T000342_20170101T000522_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T014207_20170101T014311_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T031915_20170101T032150_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T043732_20170101T045007_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T050418_20170101T051203_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T071147_20170101T072703_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T073839_20170101T074346_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T081236_20170101T081617_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T150442_20170101T150532_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T151326_20170101T151702_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T193402_20170101T194325_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T200803_20170101T200915_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T203845_20170101T204007_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T214907_20170101T2222112_B001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOP_1B_20170101T233206_20170101T234327_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: 2

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220170101T010539_20170101T013222_B001	Lotal Geocentric Ocean Line (FES)	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records
CS_OFFL_SIR_IOP_220170101T013349_20170101T013548_B001	Fouilibrium 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_220170101T024819_20170101T025016_B001	Geoid Height	There is an error with the Geoid height for one or more records
CS_OFFL_SIR_IOP_220170101T031048_20170101T031409_B001	Mean Sea Surface (2)	There is an error with the MSS height (solution 2) for one or more records
CS_OFFL_SIR_IOP_220170101T031607_20170101T031747_B001	Lotal Geocentric Ocean Line (FES)	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) for one or more records
CS_OFFL_SIR_IOP_220170101T050418_20170101T051203_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_IOP_220170101T064910_20170101T065036_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_220170101T065651_20170101T071000_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_220170101T080018_20170101T081235_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_220170101T082229_20170101T082917_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_220170101T094413_20170101T095343_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_220170101T095343_20170101T095626_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_220170101T150741_20170101T151125_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_220170101T164551_20170101T165605_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_220170101T165606_20170101T171856_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_220170101T193402_20170101T194325_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_220170101T200803_20170101T200915_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_220170101T200916_20170101T202247_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_220170101T214907_20170101T222112_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_220170101T231058_20170101T231320_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:

0

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:

36

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220170101T005441_20170101T005448_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T005716_20170101T010308_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T023622_20170101T024139_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T041507_20170101T041623_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T041631_20170101T042037_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T055009_20170101T055522_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T055522_20170101T055528_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T055528_20170101T055534_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T055535_20170101T055541_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T055542_20170101T055831_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T063833_20170101T064218_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T072916_20170101T073419_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T073427_20170101T073433_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T073433_20170101T073439_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T073439_20170101T073451_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T090830_20170101T091330_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T091355_20170101T091404_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T091412_20170101T091516_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T104914_20170101T105247_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T105254_20170101T105303_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T105309_20170101T105630_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.

CS_OFFL_SIR_IOP_220170101T122656_20170101T123200_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T123208_20170101T123535_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T140655_20170101T141232_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T141349_20170101T141434_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T150410_20170101T150423_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T150442_20170101T150532_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T154618_20170101T155127_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T172824_20170101T173030_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T190740_20170101T190939_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T191054_20170101T191440_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T200136_20170101T200256_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T204553_20170101T205342_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T222416_20170101T222629_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_220170101T222644_20170101T223233_B001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_IOP_2_20170101T231337_20170101T231435_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

CS OFFL SIR IOP 2 20170101T231337 20170101T231435 B001

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 25

Number of products with errors:

Product Test Failed Description The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T005716_20170101T010308_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T023622_20170101T024139_B001 Ice Backscatter Averaging Status The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170101T041507 20170101T041623 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T055009_20170101T055522_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T055542_20170101T055831_B001 Ice Backscatter Averaging Status The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170101T063833 20170101T064218 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T091355_20170101T091404_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170101T091412 20170101T091516 B001 Ice Backscatter Averaging Status The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170101T104914 20170101T105247 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T105309_20170101T105630_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170101T122656 20170101T123200 B001 Ice Backscatter Averaging Status The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T123208_20170101T123535_B001 Ice Backscatter Averaging Status records. The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T140655_20170101T141232_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more Ice Backscatter Averaging Status The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T150410_20170101T150423_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T150442_20170101T150532_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170101T154618 20170101T155127 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170101T172824 20170101T173030 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T190740_20170101T190939_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170101T191054 20170101T191440 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T200136_20170101T200256_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T204553_20170101T205342_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS OFFL SIR IOP 2 20170101T222416 20170101T222629 B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more CS_OFFL_SIR_IOP_2__20170101T222644_20170101T223233_B001 Ice Backscatter Averaging Status records The Ice Backscatter Averaging Status Flag has been set for one or more

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.

155

0

0

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:

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

Product type	Nb. Products	Nb. QCC Reports	Nb. Valid	Nb. Warnings	Nb. Errors
SIR_IOP_1B	274	274	274	0	0
SIR_IOP_2	274	274	274	0	0
6.1 QCC Errors					

Number of QCC reports with errors:

0

6.2 QCC Warnings

Number of QCC reports with warnings

6.3 Missing QCC Reports

Number of products with missing QCC reports: