



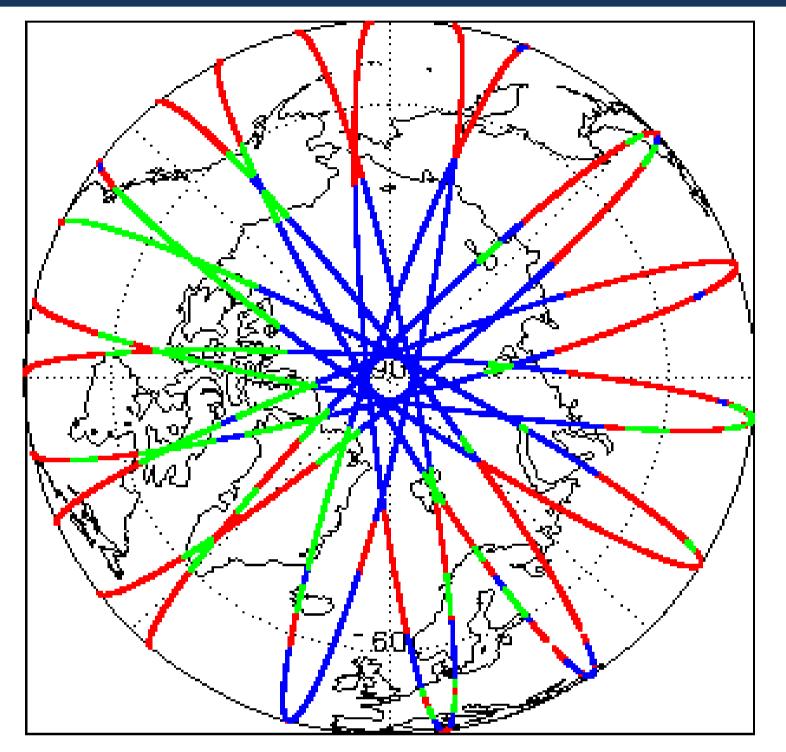
## 1. Overview

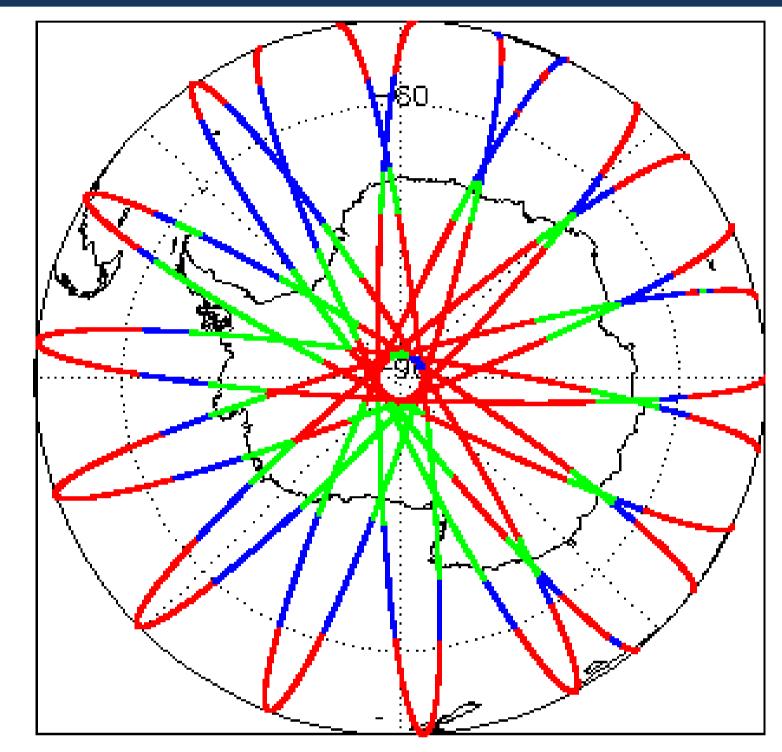
Report Production Date:	28-Sep-2020
Processor Used:	CryoSat Ice Processor
Data Used:	L1B and L2 OFFLINE Data

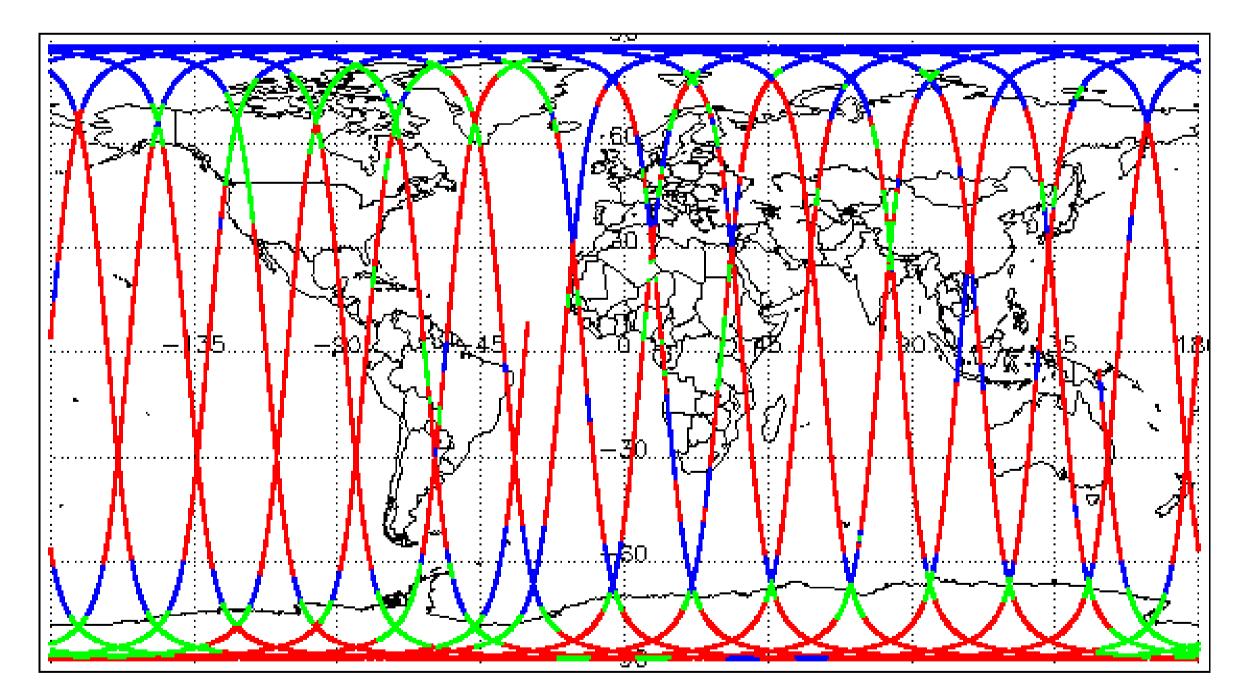
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Star Tracker Usage Check	Nominal
L1B Tracking Flag Check	See Section 4.4
L1B Calibration Usage Check	See Section 4.5
L1B & L2 Auxiliary Data File Usage Check	Nominal
L1B & L2 Auxiliary Correction Error Check	Nominal
L1B & L2 Measurement Confidence Data Check	See Section 4.8 and 5.5
QCC Errors/ Warnings	See Section 6.1, 6.2 and 6.3

Mission / Instru	iment News
26-Aug-2020	None
27-Aug-2020	None
28-Aug-2020	Nothing planned

# 2. Global Coverage



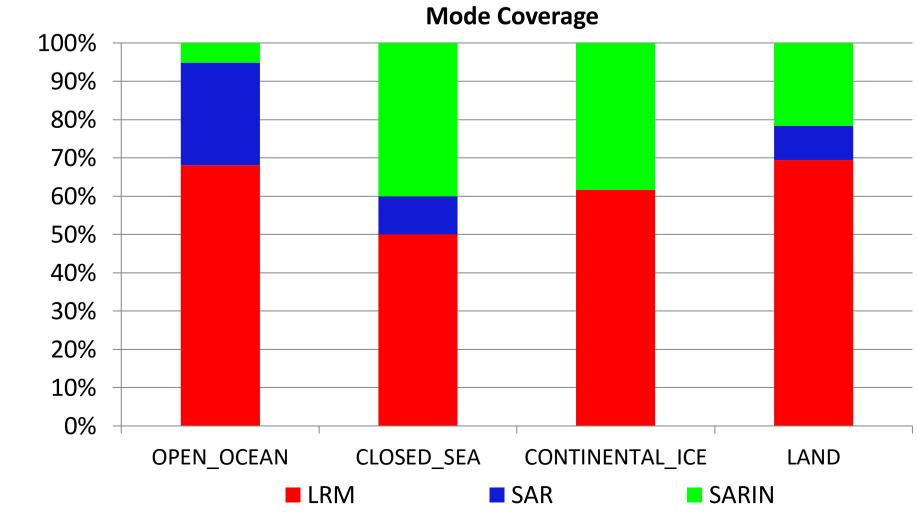


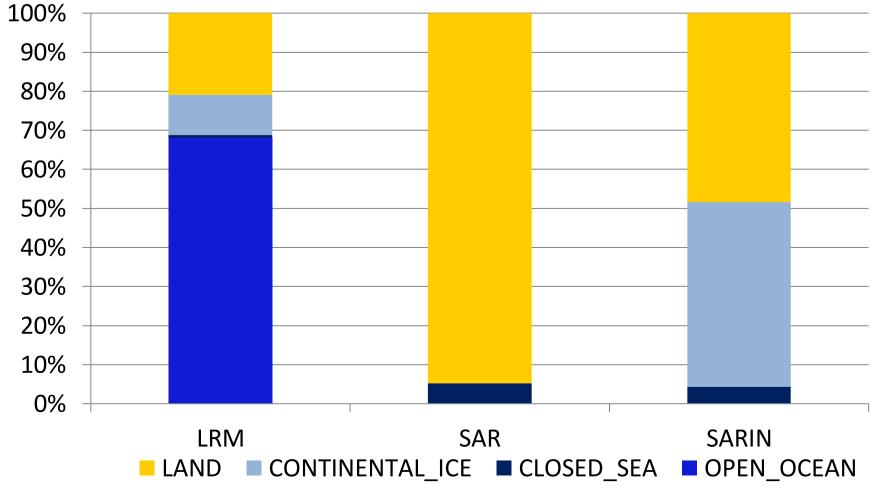




LRM	67.4
SAR	19.9
SARIn	12.7

Surface Type





## **3. Instrument Configuration**

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

SIRAL instrument(s) in use:	SIRAL - A			
4. Level 1B Data Quality Check				
4.1 L1B Product Format Che	ck			
Each product, retrieved and unpacked from	n 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 Ana	lysis			
For all products, a series of pre-defined ch	ecks are carried out 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 Star Tracker Usage Chec	k			
Each product is checked in order to ensure	e a valid star tracker file has beer	used in processing.		
Number of products with errors:	0			
4.4 L1B Tracking Flags Check				
CryoSat L1B data includes a tracking flag for each measurement record. The bit value of this flag indicates any problems when set.				
Loss of Echo Flag: This flag is currently set for some products over land, but this is to be expected.				

Number of products with errors:

85

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20200827T003922_20200827T005031_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T005034_20200827T010100_D001	Loss of echo	The tracking echo is missing for one or more records

CS\_OFFL\_SIR\_LRM\_1B\_20200827T010448\_20200827T011051\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T012424\_20200827T014010\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T014223\_20200827T014524\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T020351\_20200827T020622\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T021401\_20200827T022755\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T022935\_20200827T023418\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T023643\_20200827T024444\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T024514\_20200827T025108\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T030256\_20200827T030503\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T030625\_20200827T031337\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T031459\_20200827T033736\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T035340\_20200827T041625\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T042005\_20200827T042101\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T042237\_20200827T042613\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T042748\_20200827T042844\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T044116\_20200827T044214\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T044335\_20200827T045126\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T045129\_20200827T051717\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T053313\_20200827T055933\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T055939\_20200827T061050\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T071217\_20200827T072733\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T072738\_20200827T073653\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T073832\_20200827T073941\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T074119\_20200827T074243\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T074316\_20200827T074438\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T074648\_20200827T074731\_D001

Loss of echo Loss of echo

The tracking echo is missing for one or more records The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20200827T090412_20200827T090554_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T090610_20200827T090828_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T090831_20200827T091320_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T091503_20200827T091745_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T092030_20200827T092140_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T093744_20200827T095019_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T095305_20200827T101409_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T104326_20200827T105042_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T111807_20200827T112547_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T112727_20200827T115314_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T120135_20200827T120407_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T121218_20200827T122446_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T125628_20200827T130048_D001	Loss of echo	The tracking echo is missing for one or more records

CS\_OFFL\_SIR\_LRM\_1B\_20200827T130050\_20200827T130241\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T130416\_20200827T131541\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T131744\_20200827T133224\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T134943\_20200827T140127\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T140151\_20200827T140251\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T140613\_20200827T142231\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T143520\_20200827T144853\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T152721\_20200827T160058\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T160150\_20200827T160249\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T161357\_20200827T162010\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T162012\_20200827T162036\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T162057\_20200827T162109\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T162114\_20200827T162135\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T162257\_20200827T162355\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T162731\_20200827T164819\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T165511\_20200827T165843\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T170556\_20200827T173209\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T173213\_20200827T173216\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T173219\_20200827T173220\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T173223\_20200827T173237\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T173241\_20200827T173307\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T173310\_20200827T173359\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T173402\_20200827T173411\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T175500\_20200827T180031\_D001 CS\_OFFL\_SIR\_LRM\_1B\_20200827T180137\_20200827T182939\_D001

The tracking echo is missing for one or more records Loss of echo Loss of echo The tracking echo is missing for one or more records The tracking echo is missing for one or more records Loss of echo Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records The tracking echo is missing for one or more records Loss of echo Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records Loss of echo The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20200827T183806_20200827T184134_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T193059_20200827T193816_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T193849_20200827T193927_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T194125_20200827T194212_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T194214_20200827T194232_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T194412_20200827T194510_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T194513_20200827T194549_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T195135_20200827T195152_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T195526_20200827T200151_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T201300_20200827T201830_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T202551_20200827T210139_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T211410_20200827T211430_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T211741_20200827T211826_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T212144_20200827T212438_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T215219_20200827T215728_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T220429_20200827T223955_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T233437_20200827T233633_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T234418_20200827T235710_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20200827T235831_20200828T000052_D001	Loss of echo	The tracking echo is missing for one or more records

#### 4.5 L1B Calibration Usage Check

Each product is checked in order to ensure that the necessary calibration files have been used in processing.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_SIN_1B_20200827T041635_20200827T041642_D001	Cal1 Correction Missing	The Cal1 correction has not been applied

#### 4.6 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

#### **4.7 L1B Auxiliary Correction Error Check**

CryoSat L1B data includes a correction error flag (field 54) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

0

#### **4.8 L1B Measurement Confidence Data Check**

CryoSat L1B data includes a measurement confidence flag (field 18) for each measurement record. The bit value of this flag indicates any problems when set.

Currently, there are several common error flags raised in the Level 1B products which are expected due to operational mode or surface type. All common flags are summarised in the list below, followed by a table of any additional issues arising from this test.

Block Degraded Flag: This flag is currently set for a number of individual records generally at the start or end of products (all modes), but this is to be expected.

Phase Perturbation Flag: This flag is currently set for all L1B SARIn products, indicating that the ADC correction application is deactivated, but this is in line with the current configuration.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20200827T024514_20200827T025108_D001	IECDO ERROR IER ECDO ERROR	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_SIN_1B_20200827T041635_20200827T041642_D001	Cal1 Correction missing,	The Cal1 Correction has not been applied

## **5. 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 carried out 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

0

2

#### **5.3 L2 Auxiliary Data File Usage Check**

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

Number of products with errors:

0

0

57

#### 5.4 L2 Auxiliary Correction Error Check

CryoSat L2 data includes a correction error flag (field 30) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

#### **5.5 L2 Measurement Quality Flag Check**

CryoSat L2 data includes a quality flag (field 50) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Currently, there are several common error flags raised in the Level 2 products which are expected due to operational mode or surface type. All common flags are summarised in the list below, followed by a table of any additional issues arising from this test.

Freeboard error: This flag is correctly set in all L2 SAR products that are not discriminated as sea-ice, and for which freeboard cannot be calculated.

Height and Backscatter errors: These flags are currently set for products over land, but this is to be expected. Retracker 1 Height and Backscatter error flags are also set for products over sea-ice, but this is to be expected.

Peakiness error: This flag is currently set for products over sea-ice, but this is to be expected.

SARIN X-Track Angle Error: This flag is set when the difference between the computed surface elevation and the DEM is >50 m. The DEM is only available over Greenland and Antarctica and as a result this flag is set for L2 SARIn products in all other locations as expected.

**SSHA** interpolation error: This flag is currently set for a number of SAR products occurring at surface type boundaries, but this is to be expected.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_LRM_220200826T235116_20200827T001535_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T003922_20200827T005031_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T005034_20200827T010100_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T012424_20200827T014010_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T014905_20200827T015658_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T021401_20200827T022755_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220200827T022935_20200827T023418_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T030256_20200827T030503_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 , a height error for Retracker 3 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220200827T030625_20200827T031337_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T031459_20200827T033736_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records

CS_OFFL_SIR_LRM_220200827T035340_20200827T041625_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T042237_20200827T042613_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220200827T045129_20200827T051717_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T053313_20200827T055933_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220200827T055939_20200827T061050_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220200827T062851_20200827T065519_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T071217_20200827T072733_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T072738_20200827T073653_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T074802_20200827T074936_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T080132_20200827T083456_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T090412_20200827T090554_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T092442_20200827T092902_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T093744_20200827T095019_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 , a height error for Retracker 3 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220200827T095305_20200827T101409_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220200827T104326_20200827T105042_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T105138_20200827T105544_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220200827T110239_20200827T110422_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T111807_20200827T112547_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220200827T112727_20200827T115314_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220200827T121218_20200827T122446_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T122513_20200827T124233_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T125628_20200827T130048_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220200827T130416_20200827T131541_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220200827T131744_20200827T133224_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T134943_20200827T140127_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T140613_20200827T142231_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 , a height error for Retracker 3 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220200827T143520_20200827T144853_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220200827T152721_20200827T160058_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records

CS_OFFL_SIR_LRM_220200827T162012_20200827T162036_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220200827T162114_20200827T162135_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220200827T162731_20200827T164819_D001		There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220200827T170556_20200827T173209_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T180137_20200827T182939_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T184549_20200827T191932_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T193059_20200827T193816_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220200827T194412_20200827T194510_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220200827T200810_20200827T200834_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T202551_20200827T210139_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 , a height error for Retracker 3 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220200827T211031_20200827T211248_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T213053_20200827T214704_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T220429_20200827T223955_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220200827T225008_20200827T225148_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220200827T230206_20200827T230645_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T230722_20200827T232503_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T234418_20200827T235710_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220200827T235831_20200828T000052_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_SIN_220200827T041635_20200827T041642_D001		The Calibration correction is missing or has been taken from the IPFDB instead of the Calibration products for one or more records

# 6. 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	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_LRM_1B	141	141	141	0	0
SIR_SAR_1B	101	101	101	0	0
SIR_SIN_1B	104	104	104	0	0
SIR_LRM_2	141	141	135	6	0
SIR_SAR_2	104	101	101	0	0
SIR_SIN_2	101	104	102	2	0
SIR_GDR_2	14	14	0	0	14

### 6.1 QCC Errors

#### Number of products with QCC errors:

14

Product Type	MPHDUTNCDF	MPHXPFNCDF	MPHXVFNCDF	MPHYPFNCDF	MPHYVFNCDF	MPHZPFNCDF	MPHZVFNCDF	-	-	-	-
SIR_GDR_2_	14	14	14	14	14	14	14	-			

<b>Test Description Key:</b>	est Description Key:					
Abbreviation	Test name	Details				
MPHDUTNCDF	MPH_Delta_UT1_NetCDF	Delta_UT1 mismatch				
MPHXPFNCDF	MPH_X_Position_Float_v2_NetCDF	X_Position mismatch (DBL float (GDR), rounded to 100)				
MPHXVFNCDF	MPH_X_Velocity_Float_v2_NetCDF	X_Velocity mismatch (DBL float (GDR), rounded to 1)				
MPHYPFNCDF	MPH_Y_Position_Float_v2_NetCDF	Y_Position mismatch (DBL float (GDR), rounded to 100)				
MPHYVFNCDF	MPH_Y_Velocity_Float_v2_NetCDF	Y_Velocity mismatch (DBL float (GDR), rounded to 1)				
MPHZPFNCDF	MPH_Z_Position_Float_v2_NetCDF	Z_Position mismatch (DBL float (GDR), rounded to 100)				
MPHZVFNCDF	MPH_Z_Velocity_Float_v2_NetCDF	Z_Velocity mismatch (DBL float (GDR), rounded to 1)				

## 6.2 QCC Warnings

Number of QCC reports with warnings

8

0

Total number of occurrences of each warning

Product Type	AXDME	AXSMMEOCI	-	-	-	-	-
SIR_LRM_2_	0	6					
SIR_SIN_2_	2	0					

Test Description Key:					
Abbreviation	Test name	Details			
AXDME	AttributeXrefDemMustExist	The xref_dem attribute is mandatory in SIN products over continental ice			
AXSMMEOCI	AttributeXrefSlopeModelMustExistOverContinentalIce	The xref_slope_model is mandatory in LRM products over continental ice			

## 6.2 Missing QCC Reports

Number of products with missing QCC reports: