

# 19/03/2021



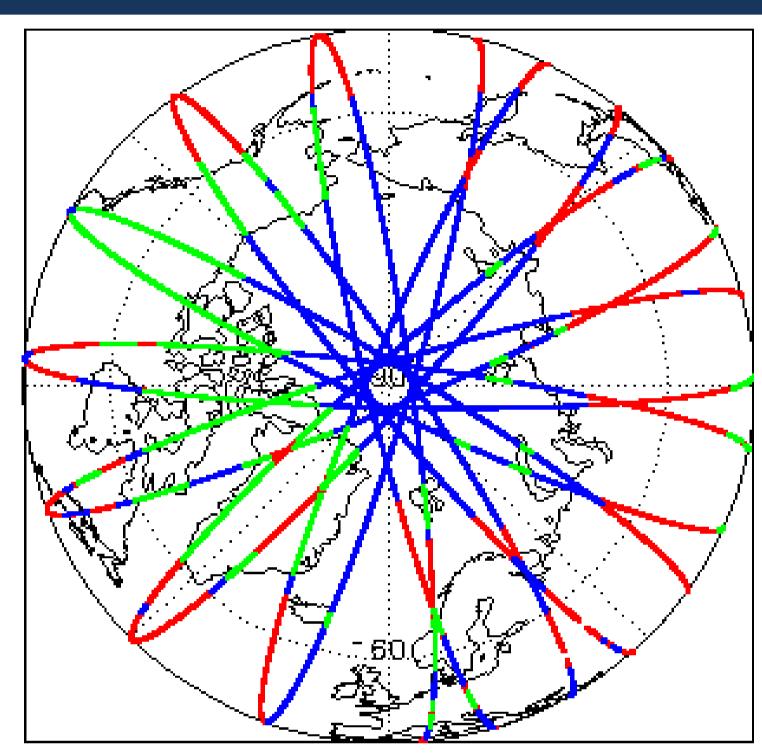
# 1. Overview

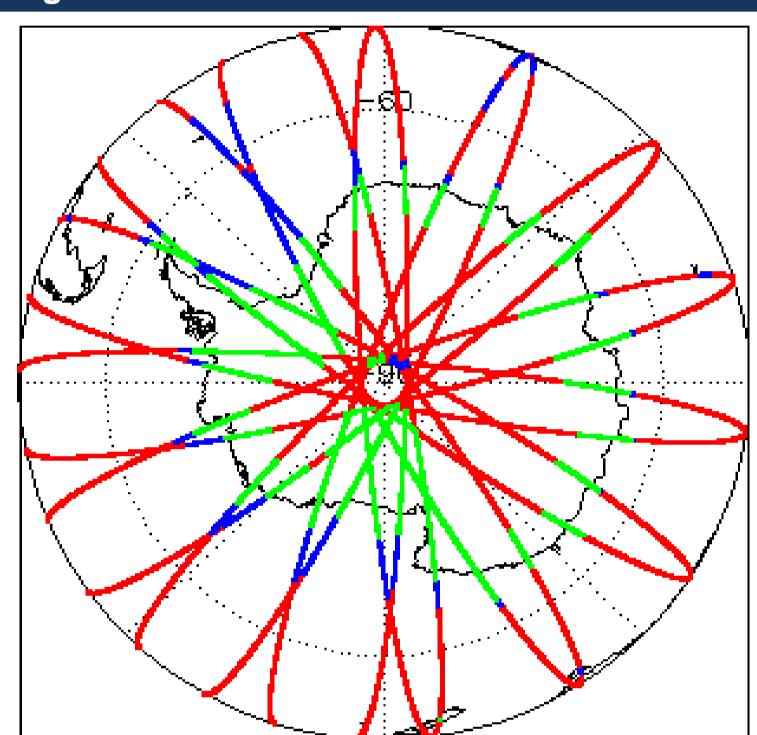
Report Production Date:	19-Apr-2021			
Processor Used:	CryoSat Ice Processor			
Data Used:	L1B and L2 OFFLINE Data			

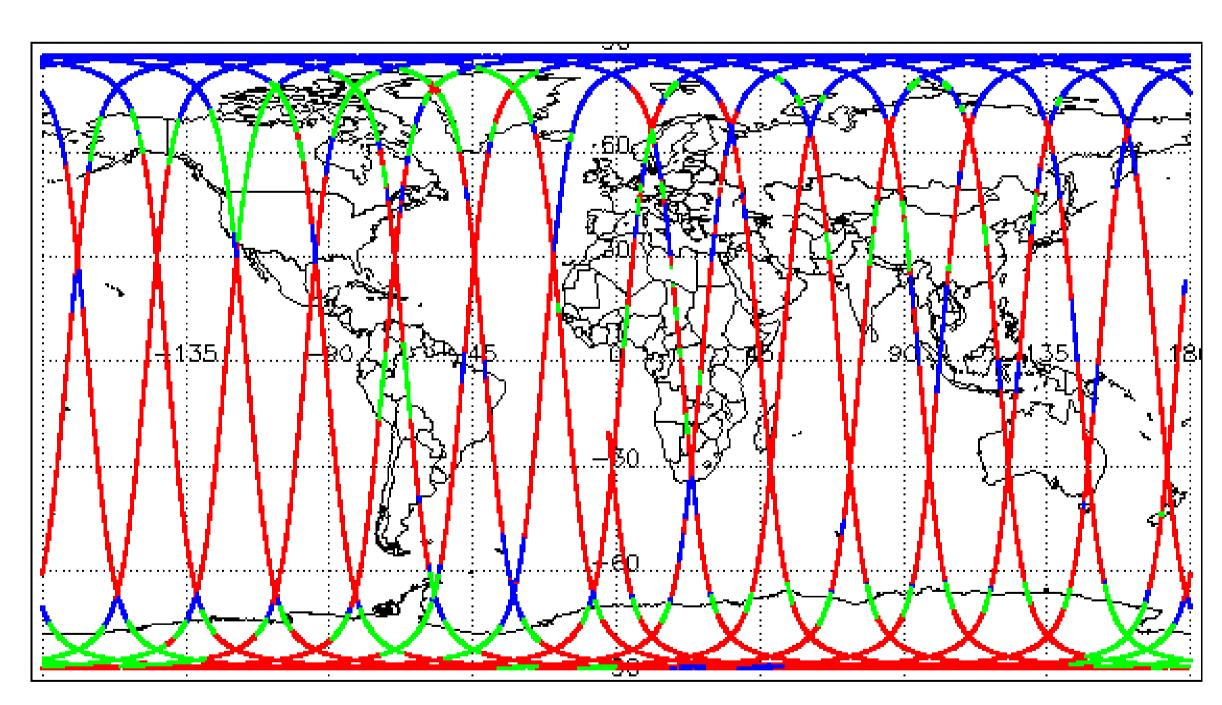
Check	Status		
Server check: science-pds.cryosat.esa.int	Nominal		
Server check: calval-pds.cryosat.esa.int	Nominal		
Product Software Check	Nominal		
Product Format Check	Nominal		
Product Header Analysis	Nominal		
Star Tracker Usage Check	Nominal		
L1B Tracking Flag Check	See Section 4.4		
L1B Calibration Usage Check	Nominal		
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		

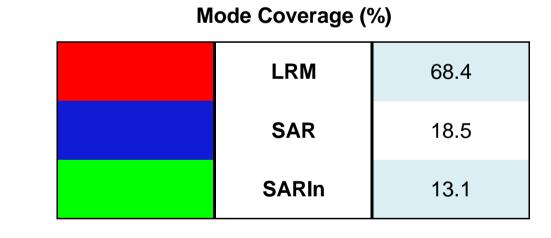
Mission / Instru	Mission / Instrument News							
18-Mar-2021	None							
19-Mar-2021	None							
20-Mar-2021	Nothing planned							

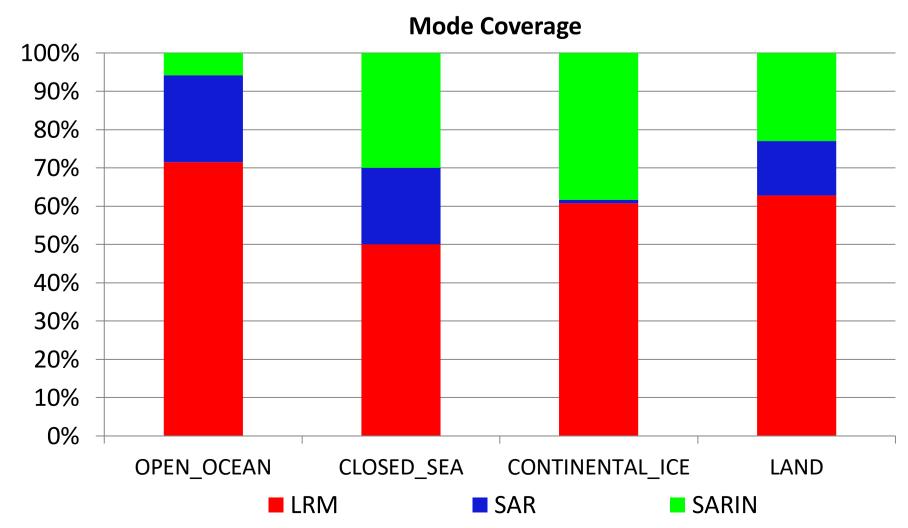
# 2. Global Coverage

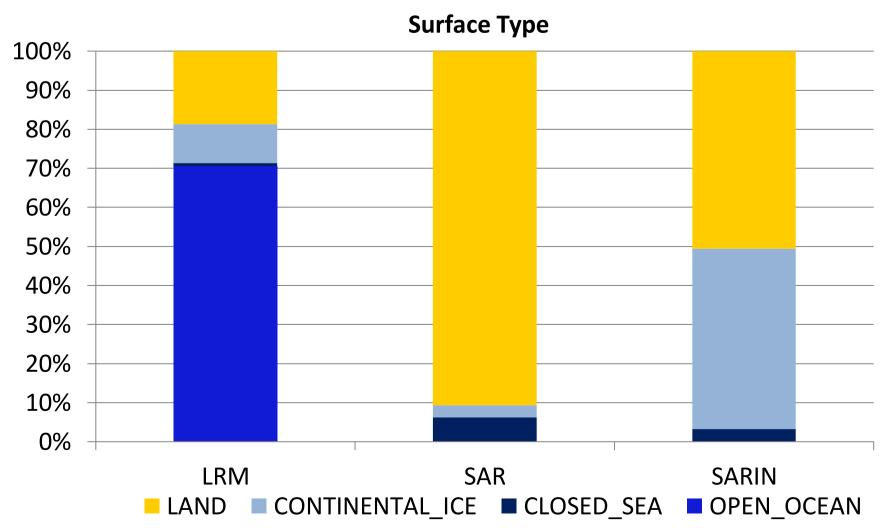












### 3. Instrument Configuration

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

SIRAL instrument(s) in use:

SIRAL - A

0

0

# 4. 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:** 

### **4.2 L1B 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:** 

### 4.3 Star Tracker Usage Check

Each product is checked in order to ensure a valid star tracker file has been used in processing.

**Number of products with errors:** 

### 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.

roduct	Test Failed	Description
S_OFFL_SIR_LRM_1B_20210319T000024_20210319T001744_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T001756_20210319T002405_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T003105_20210319T003517_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T012628_20210319T012653_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T012656_20210319T012705_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T012707_20210319T012718_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T012720_20210319T012742_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T014857_20210319T015611_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T015632_20210319T020308_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T021017_20210319T021234_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T022104_20210319T023330_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T030516_20210319T030529_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T030532_20210319T030552_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T030559_20210319T030601_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T030604_20210319T030635_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T030643_20210319T030724_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T030726_20210319T030757_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T030807_20210319T030814_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T030817_20210319T030906_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T031026_20210319T031107_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T032632_20210319T034213_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T040313_20210319T040937_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T041458_20210319T041511_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T041519_20210319T042605_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T042607_20210319T042645_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T042917_20210319T043048_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T044357_20210319T044833_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T044921_20210319T044947_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T044949_20210319T045003_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T045006_20210319T045432_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T045434_20210319T045553_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T045616_20210319T045735_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T052849_20210319T053004_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T053402_20210319T060129_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T060351_20210319T060914_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T061037_20210319T061127_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T062311_20210319T062944_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T062947_20210319T063010_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T063152_20210319T063241_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T063246_20210319T063249_D001	Loss of echo	The tracking echo is missing for one or more records
S_OFFL_SIR_LRM_1B_20210319T063501_20210319T065521_D001	Loss of echo	The tracking echo is missing for one or more records

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CS_OFFL_SIR_LRM_1B_20210319T080409_20210319T080447_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T080452_20210319T080454_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T080458_20210319T080459_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T080504_20210319T080507_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T080510_20210319T080513_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T080516_20210319T080522_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T080524_20210319T080529_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T080533_20210319T081403_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T081405_20210319T084025_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T084647_20210319T085017_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T085318_20210319T092815_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T094119_20210319T094240_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T094446_20210319T094703_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T094737_20210319T094826_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T095012_20210319T095116_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T095314_20210319T100159_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T100253_20210319T101043_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T102146_20210319T102711_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T112621_20210319T112635_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T112700_20210319T112742_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T113034_20210319T113612_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T120111_20210319T120610_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T124750_20210319T124812_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T124815_20210319T124849_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T124852_20210319T124910_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T134323_20210319T134516_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T135159_20210319T135913_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T135915_20210319T135918_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T135920_20210319T140750_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T141418_20210319T142230_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T142546_20210319T142555_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T142557_20210319T142600_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T142603_20210319T142615_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T142618_20210319T142624_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T142627_20210319T142731_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T142734_20210319T142741_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T142748_20210319T142755_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T142758_20210319T142834_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T142841_20210319T142842_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T150033_20210319T151513_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T152219_20210319T152429_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T153106_20210319T154641_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T154842_20210319T155802_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T155921_20210319T155938_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T155940_20210319T160336_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T160338_20210319T160433_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T160436_20210319T160828_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T162525_20210319T162554_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T162616_20210319T163733_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T173436_20210319T173512_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T173901_20210319T173936_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T174031_20210319T174051_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T174053_20210319T174054_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T174100_20210319T174100_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T174104_20210319T174719_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T180230_20210319T180807_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T180931_20210319T183644_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T184938_20210319T191520_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T191716_20210319T192404_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T192404_20210319T192520_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T194703_20210319T194705_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T194708_20210319T194802_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T194708_20210319T194802_D001 CS_OFFL_SIR_LRM_1B_20210319T202849_20210319T205743_D001	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_20210319T205938_20210319T210055_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T210132_20210319T210340_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T210515_20210319T210706_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T220028_20210319T220550_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T221634_20210319T222004_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T222127_20210319T222416_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T222418_20210319T222611_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T222631_20210319T222859_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T222946_20210319T223131_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210319T223800_20210319T223839_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:

#### 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:

#### 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:

#### 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:

## 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:

### 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:

### **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: 55

Product	Test Failed	Description
C.S. OFFI. SIR LRIVLY 202103191000024 202103191001744 1001		There is a height and backscatter error for Retracker 2 for one or more records
	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records

So CHILOR 1992 - 200-0001 CONTROL ACTION PRODUCT CONTROL MARKS STORY CONTROL AND ACTION CONTROL			
So OFF DELINIO, 2 SPECIAL DELINIO SERVICE DELINIO DILI	CS_OFFL_SIR_LRM_220210319T003720_20210319T005927_D001	, , , , , , , , , , , , , , , , , , , ,	
Sept	CS_OFFL_SIR_LRM_220210319T005958_20210319T011248_D001	, ,	
### 1997 - 1997	CS_OFFL_SIR_LRM_220210319T013116_20210319T014516_D001		
### STATE   Proceedings   Processor	CS_OFFL_SIR_LRM_220210319T014857_20210319T015611_D001	, ,	
SECURE 2 CONTROL 2012 TOTAL DESCRIPTION AND ADDRESS AN	CS_OFFL_SIR_LRM_220210319T015632_20210319T020308_D001	, , , , , , , , , , , , , , , , , , , ,	
SS-OFFL SIR LEN 2 202125-97763902 20210317002456 D001  Perit Biomandar 2). Secretain End of Research 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of manufact 2 and a higher in the forecasts of the control of the forecasts	CS_OFFL_SIR_LRM_220210319T022104_20210319T023330_D001	Error (Retracker 2), Surface model	
CS_OFFL_SR_LRN_2_202***C019T05042_02*****C019T04041_DOD?*** CS_OFFL_SR_LRN_2_202****C019T05042_02******C019T04041_DOD?*** CS_OFFL_SR_LRN_2_202******C019T05047_02*******C019T04041_DOD?*** CS_OFFL_SR_LRN_2_202*********************************	CS_OFFL_SIR_LRM_220210319T023442_20210319T024737_D001	· · · · · · · · · · · · · · · · · · ·	
Secret. Similary 2 - 200100197000023 2201031970592 3,0001 Secret. Similary 2 - 20010019704012 2201031970592 3,0001 Secret. Similary 3 - 2001001970592 2201031970592 3,0001 Secret. Similary 3 - 2001001970593 2,0001031970592 3,0001 Secret. Similary 3 - 2001001970591 2,0001031970592 3,0001 Secret. Similary 3 - 2001001970591 2,000103197059 3,000103197059 3,000103197059 3,000103197059 3,000103197059 3,	CS_OFFL_SIR_LRM_220210319T031402_20210319T032428_D001	(Retracker 3), Backscatter Error	
Sec. OFFL. SIR. LEM. 2. 200*0319T04019 2221019T04019 DD01  Service Remarker 23, Bandescriber Service 14 for one or more records.  Service 15 for 16 for 16 for 16 for one or more records.  Service 27 or 16 for 16 for 16 for one or more records.  Service 27 or 16 for 16 for one or more records.  Service 27 or 16 for 16 for one or more records.  Service 27 or 16 for 16 for one or more records.  Service 27 or 16 for 16 for one or more records.  Service 27 or 16 for 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 27 or 16 for one or more records.  Service 28 for one or more records.  Service 29 for one or more rec	CS_OFFL_SIR_LRM_220210319T032632_20210319T034213_D001	(Retracker 3), Backscatter Error	
Error (Retrocker 2) seconds  CS OFFL SIR LRM 2 20010019TH42617 20210019TH42615 D001  Permitted 37 Bankscarder 2, Height Error (Retrocker 3) but for Retrocker 3 for one or more records  CS OFFL SIR LRM 2 20010019TH42617 20210319TH42615 D001  Surface Model Liveraination  No DEM or Sope Model was used for the decision of one or more records  CS OFFL SIR LRM 2 20010019TH42617 20210319TH42615 D001  Error (Retrocker 3) Butbocarder Error (Retrocker	CS_OFFL_SIR_LRM_220210319T035744_20210319T040259_D001	, ,	
CS_OFFL_SIR_LBM_2_20210319T042917_20210319T04294_D001  Surface Note University in the Surface Annual Surface S	CS_OFFL_SIR_LRM_220210319T040313_20210319T040937_D001	· · · · · · · · · · · · · · · · · · ·	
Height Error (Retracker 2), Backscatter Error (Retracker 2), Backs	CS_OFFL_SIR_LRM_220210319T041519_20210319T042605_D001	(Retracker 3), Backscatter Error	
Error (Retracker 2) records  CS_OFFL_SIR_LRM_2_202109197063402_202103197080129_D001  Height Error (Retracker 2), Backscatter Error (	CS_OFFL_SIR_LRM_220210319T042917_20210319T043048_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
End (Retracker 2)  CS_OFFL_SIR_LRM_2_20210319T083901_20210319T085521_D001  Find (Retracker 2)  Find (Retracker 3)  Find (Retracker 2)  Find (Retracker 3)  Find (Retracker 2)  Find (Retracker 3)  Find (Retra	CS_OFFL_SIR_LRM_220210319T050552_20210319T052116_D001		
CS_OFFL_SIR_LRM_2_20210319T085613_20210319T070055_D001  Height Error (Retracker 2), Backscatter croords  There is a height and backscatter error for Retracker 2 for one or more records  CS_OFFL_SIR_LRM_2_20210319T071338_20210319T074107_D001  CS_OFFL_SIR_LRM_2_20210319T071338_20210319T074107_D001  CS_OFFL_SIR_LRM_2_20210319T061405_20210319T084025_D001  CS_OFFL_SIR_LRM_2_20210319T061405_20210319T084025_D001  CS_OFFL_SIR_LRM_2_20210319T085318_20210319T094240_D001  CS_OFFL_SIR_LRM_2_20210319T085318_20210319T094240_D001  CS_OFFL_SIR_LRM_2_20210319T094737_20210319T094240_D001  CS_OFFL_SIR_LRM_2_20210319T094737_20210319T094826_D001  CS_OFFL_SIR_LRM_2_20210319T094737_20210319T094826_D001  CS_OFFL_SIR_LRM_2_20210319T094737_20210319T094826_D001  CS_OFFL_SIR_LRM_2_20210319T095012_20210319T094826_D001  CS_OFFL_SIR_LRM_2_20210319T095012_20210319T094826_D001  CS_OFFL_SIR_LRM_2_20210319T095012_20210319T094826_D001  CS_OFFL_SIR_LRM_2_20210319T095012_20210319T094826_D001  CS_OFFL_SIR_LRM_2_20210319T095012_20210319T094826_D001  CS_OFFL_SIR_LRM_2_20210319T095012_20210319T094826_D001  CS_OFFL_SIR_LRM_2_20210319T095012_20210319T094826_D001  Height Error (Retracker 2), Backscatter Error (Fore is a height and backscatter error for Retracker 2 for one or more records  CS_OFFL_SIR_LRM_2_20210319T095012_20210319T094826_D001  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  CS_OFFL_SIR_LRM_2_20210319T100253_20210319T10053_D001  Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2) and height and backscatter error for Retracker 2 for one or more records  CS_OFFL_SIR_LRM_2	CS_OFFL_SIR_LRM_220210319T053402_20210319T060129_D001		
Error (Retracker 2)  Ferror (Retracker 3)  Ferror (Retracker 2)  Ferror (Retracker 3)  F	CS_OFFL_SIR_LRM_220210319T063501_20210319T065521_D001		
CS OFFL SIR LRM 2 20210319T071338 20210319T074107 D001  (Retracker 3). Backscatter Error (Retracker 2). Height Error (Retracker 3). Backscatter Error (Retracker 3). Backscatter Error (Retracker 3). Backscatter Error (Retracker 3). Backscatter Error (Retracker 3). Subscience of the Retracker 2 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 3 and a height error (Retracker 3). Subscience of the Retracker 2 and a height error (Retracker 3). Subscience of the Retracker 2 and a height error (Retracker 3). Subscience of the Retracker 2 and a height error (Retracker 3). Subscience of the Retracker 2 and a height error (Retracker 2). Subscience of the Retracker 2 and a height error (Retracker 2). Subscience of the Retracker 2 and a height error (Retracker 2). Subscience of the Retracker 2 and a height error (Retracker 2). Subscience of the Retracker 2 and a height error (Retr	CS_OFFL_SIR_LRM_220210319T065613_20210319T070055_D001		
CS_OFFL_SIR_LRM_2_20210319T081405_20210319T084025_D001  (Retracker 3), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2) and a height error (Retracker 2), Surface model unevailable (Retracker 2), Surface model unevailable (Retracker 2), Backscatter Error (Retracker 2), Surface model unevailable (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Back	CS_OFFL_SIR_LRM_220210319T071338_20210319T074107_D001	(Retracker 3), Backscatter Error	
CS_OFFL_SIR_LRM_2_20210319T094318_20210319T094240_D001  Error (Retracker 2), Surface model unavailable Unavailable  CS_OFFL_SIR_LRM_2_20210319T094119_20210319T094240_D001  Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 3) for one or more records  There is a height and backscatter error for Retracker 2 and a height error (Retracker 2) for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records	CS_OFFL_SIR_LRM_220210319T081405_20210319T084025_D001	(Retracker 3), Backscatter Error	
CS_OFFL_SIR_LRM_2_20210319T094119_20210319T094240_D001  (Retracker 3). Backscatter Error (Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a neight error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records	CS_OFFL_SIR_LRM_220210319T085318_20210319T092815_D001	Error (Retracker 2), Surface model	
Error (Retracker 2)  Error (Retracker 2)  Error (Retracker 2)  Height Error (Retracker 2), Backscatter records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records	CS_OFFL_SIR_LRM_220210319T094119_20210319T094240_D001	(Retracker 3), Backscatter Error	
Error (Retracker 2)  CS_OFFL_SIR_LRM_2_20210319T100253_20210319T101043_D001  Height Error (Retracker 2), Backscatter Fror (Ret	CS_OFFL_SIR_LRM_220210319T094737_20210319T094826_D001	, ,	
CS_OFFL_SIR_LRM_2_20210319T100253_20210319T101043_D001  Error (Retracker 2)  Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter records  CS_OFFL_SIR_LRM_2_20210319T105759_20210319T110640_D001  Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter records  There is a height and backscatter error for Retracker 2 for one or more records  CS_OFFL_SIR_LRM_2_20210319T105759_20210319T110640_D001  Height Error (Retracker 2), Backscatter Error (Retracker 2)  Height Error (Retracker 2), Backscatter records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records	CS_OFFL_SIR_LRM_220210319T095012_20210319T095116_D001	, , , , , , , , , , , , , , , , , , , ,	
CS_OFFL_SIR_LRM_2_20210319T103214_20210319T105514_D001  Error (Retracker 2)  Fecords  There is a height and backscatter error for Retracker 2 for one or more records  CS_OFFL_SIR_LRM_2_20210319T111955_20210319T112239_D001  Height Error (Retracker 2), Backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records	CS_OFFL_SIR_LRM_220210319T100253_20210319T101043_D001		
CS_OFFL_SIR_LRM_2_20210319T105759_20210319T110640_D001  Error (Retracker 2)  Height Error (Retracker 2), Backscatter Error for Retracker 2 for one or more records  CS_OFFL_SIR_LRM_2_20210319T111955_20210319T112239_D001  Height Error (Retracker 2), Backscatter records  Height Error (Retracker 2), Backscatter records  Height Error (Retracker 2), Backscatter records  There is a height and backscatter error for Retracker 2 for one or more	CS_OFFL_SIR_LRM_220210319T103214_20210319T105514_D001	, , , , , , , , , , , , , , , , , , , ,	
CS_OFFL_SIR_LRM_220210319T11255_20210319T112239_D001  Error (Retracker 2)  Height Error (Retracker 2), Backscatter  There is a height and backscatter error for Retracker 2 for one or more	CS_OFFL_SIR_LRM_220210319T105759_20210319T110640_D001	, ,	
CS OFFI SIR IRM 2 202103191113913 202103191115901 D001	CS_OFFL_SIR_LRM_220210319T111955_20210319T112239_D001	· · · · · · · · · · · · · · · · · · ·	
	CS_OFFL_SIR_LRM_220210319T113913_20210319T115901_D001	, , , , , , , , , , , , , , , , , , , ,	

CS_OFFL_SIR_LRM_220210319T121124_20210319T124501_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_220210319T131051_20210319T133347_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_220210319T135159_20210319T135913_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_220210319T135920_20210319T140750_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_220210319T140755_20210319T140936_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_220210319T141418_20210319T142230_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_220210319T144219_20210319T145819_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_220210319T150033_20210319T151513_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_220210319T153106_20210319T154641_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_220210319T154842_20210319T155802_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_220210319T162616_20210319T163733_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_220210319T164239_20210319T165749_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_220210319T171031_20210319T172745_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_220210319T173001_20210319T173212_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_220210319T180931_20210319T183644_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_220210319T184938_20210319T191520_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_220210319T194708_20210319T194802_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_220210319T194822_20210319T201538_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_220210319T202849_20210319T205743_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_220210319T210515_20210319T210706_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_220210319T212014_20210319T215503_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_220210319T223315_20210319T223413_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_220210319T225959_20210319T230828_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_220210319T231114_20210319T233421_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_220210319T234620_20210319T235948_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 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	183	183	183	0	0
SIR_SAR_1B	142	142	142	0	0
SIR_SIN_1B	102	102	102	0	0
SIR_LRM_2	183	183	180	3	0

SIR_SAR_2	102	142	142	0	0
SIR_SIN_2	142	102	102	0	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>	st 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** 

3

Total number of occurrences of each warning

Product Type	AXSMMEOCI	-	-	-	-	-	-
SIR_LRM_2_	3						

st Description Key:						
est name	Details					
ttributeXrefSlopeModelMustExistOverContinentalIce	The xref_slope_model is mandatory in LRM products over continental ice					

# 6.2 Missing QCC Reports

Number of products with missing QCC reports:

0