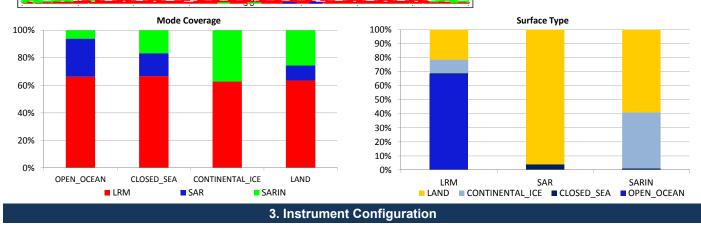


# IDEAS+ Daily Report for OFFLINE data:

<u>15/07/2017</u>

Report Production Date:	11-Aug-2017	Check	Status
		Server check: science-pds.cryosat.esa.int	Nominal
Processor Used:	CryoSat Ice Processor	Server check: calval-pds.cryosat.esa.int	Nominal
Processor Usea:		Product Software Check	Nominal
Data Used:	L1B and L2 OFFLINE Data	Product Format Check	Nominal
Data Osed:		Product Header Analysis	Nominal
		Star Tracker Usage Check	Nominal
		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 4.7 and 5.5

15-Jul-2017 None 16-Jul-2017 Nothing planned	
2. Global	Coverage
	Global Coverage - South Pole
	LRM 21.1 SAR 13.6
	SARIN 0.0



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 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: 0

#### 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 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:

### 4.5 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

#### 4.6 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:

#### 4.7 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

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20170715T020504_20170715T021157_C001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_LRM_1B_20170715T052525_20170715T052655_C001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_LRM_1B_20170715T104527_20170715T104600_C001		The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_LRM_1B_20170715T120323_20170715T123503_C001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_LRM_1B_20170715T134028_20170715T134357_C001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo

## 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).

#### 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

#### 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.

99

Test Failed

Description

Product CS OFFL SIR LRM 2 20170714T235935 20170715T000753 C001 CS OFFL SIR LRM 2 20170715T003712 20170715T005807 C001 CS OFFL SIR LRM 2 20170715T011418 20170715T013835 C001 CS OFFL SIR LRM 2 20170715T013837 20170715T014211 C001 CS OFFL SIR LRM 2 20170715T020322 20170715T020451 C001 CS OFFL SIR LRM 2 20170715T021317 20170715T023812 C001 CS OFFL SIR LRM 2 20170715T031002 20170715T032710 C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T033956\_20170715T034636\_C001 CS OFFL SIR LRM 2 20170715T034954 20170715T035732 C001 CS\_OFFL\_SIR\_LRM\_2\_20170715T042112\_20170715T042653\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T043417\_20170715T050642\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T050900\_20170715T050916\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T050941\_20170715T050951\_C001 CS OFFL SIR LRM 2 20170715T051911 20170715T052045 C001 CS OFFL SIR LRM 2 20170715T053926 20170715T055539 C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T061240\_20170715T064826\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T065808\_20170715T070009\_C001 CS OFFL SIR LRM 2 20170715T071541 20170715T073319 C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T074238\_20170715T074449\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T075221\_20170715T082822\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T084021\_20170715T085918\_C001 CS OFFL SIR LRM 2 20170715T090006 20170715T091326 C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T092200\_20170715T092358\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T093121\_20170715T094619\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T094821\_20170715T095744\_C001 CS\_OFFL\_SIR\_LRM\_2\_20170715T101950\_20170715T103706\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T110019\_20170715T110801\_C001 CS OFFL SIR LRM 2 20170715T111057 20170715T112522 C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T120323\_20170715T123503\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T123834\_20170715T124050\_C001 CS OFFL SIR LRM 2 20170715T124054 20170715T124656 C001 CS OFFL SIR LRM 2 20170715T125039 20170715T131523 C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T132442\_20170715T132514\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T134626\_20170715T135745\_C001 CS OFFL SIR LRM 2 20170715T142952 20170715T145608 C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T150055\_20170715T150707\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T152101\_20170715T153659\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T153946\_20170715T155209\_C001 CS OFFL SIR LRM 2 20170715T164436 20170715T164624 C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T165908\_20170715T173201\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T174912\_20170715T180547\_C001 CS OFFL SIR LRM 2 20170715T182458 20170715T182509 C001 CS OFFL SIR LRM 2 20170715T183536 20170715T191052 C001

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CS\_OFFL\_SIR\_LRM\_2\_20170715T191905\_20170715T192317\_C001 CS OFFL SIR LRM 2 20170715T192804 20170715T195354 C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T195409\_20170715T200204\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T201415\_20170715T202837\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T203317\_20170715T203450\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T203457\_20170715T205011\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T210910\_20170715T212131\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T212330\_20170715T214053\_C001 CS\_OFFL\_SIR\_LRM\_2\_\_20170715T220307\_20170715T221237\_C001 CS OFFL SIR LRM 2 20170715T221440 20170715T222908 C001 CS OFFL SIR LRM 2 20170715T230435 20170715T231557 C001 CS OFFL SIR LRM 2 20170715T235248 20170716T000804 C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T010058\_20170715T010331\_C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T010707\_20170715T010714\_C001 CS OFFL SIR SIN 2 20170715T011041 20170715T011236 C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T023939\_20170715T024113\_C001 CS OFFL SIR SIN 2 20170715T024621 20170715T024627 C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T024955\_20170715T025124\_C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T041953\_20170715T042112\_C001 CS OFFL SIR SIN 2 20170715T042653 20170715T042737 C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T042855\_20170715T043009\_C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T055912\_20170715T060037\_C001 CS\_OFFL\_SIR\_SIN\_2\_20170715T060547\_20170715T060852\_C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T073943\_20170715T074238\_C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T074450\_20170715T075011\_C001 CS OFFL SIR SIN 2 20170715T083546 20170715T084008 C001 CS OFFL SIR SIN 2 20170715T092358 20170715T092521 C001 CS OFFL SIR SIN 2 20170715T092900 20170715T093037 C001 CS OFFL SIR SIN 2 20170715T101442 20170715T101554 C001 CS OFFL SIR SIN 2 20170715T101725 20170715T101950 C001 CS OFFL SIR SIN 2 20170715T105628 20170715T110019 C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T110801\_20170715T110946\_C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T115402\_20170715T115625\_C001 CS OFFL SIR SIN 2 20170715T115643 20170715T115827 C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T123643\_20170715T123834\_C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T124051\_20170715T124054\_C001 CS OFFL SIR SIN 2 20170715T124656 20170715T124906 C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T132740\_20170715T132757\_C001 CS\_OFFL\_SIR\_SIN\_2\_20170715T141620\_20170715T141758\_C001 CS OFFL SIR SIN 2 20170715T141918 20170715T142044 C001 CS OFFL SIR SIN 2 20170715T142501 20170715T142754 C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T155614\_20170715T155955\_C001 CS OFFL SIR SIN 2 20170715T160536 20170715T160650 C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T164625\_20170715T164719\_C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T173543\_20170715T173859\_C001 CS OFFL SIR SIN 2 20170715T174411 20170715T174537 C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T191257\_20170715T191647\_C001 CS OFFL SIR SIN 2 20170715T192318 20170715T192425 C001 CS\_OFFL\_SIR\_SIN\_2\_\_20170715T200216\_20170715T200405\_C001

Surface Model Unavailable Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2) Height Error (Retracker 2), Backscatter Error (Retracker 2) Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error Retracker 2) Height Error (Retracker 2), Backscatter Error (Retracker 2) SARIn X-track Angle Error SARIn X-track Angle Error, Surface Model Unavailable SARIn X-track Angle Error, Surface Model Unavailable SARIn X-track Angle Error SARIn X-track Angle Error SARIn X-track Angle Error SARIn X-track Angle Error, Surface Model Unavailable SARIn X-track Angle Error SARIn X-track Angle Error, Surface Model Unavailable SARIn X-track Angle Error SARIn X-track Angle Error SARIn X-track Angle Error SARIn X-track Angle Error SARIn X-track Angle Error

No DEM or Slope Model was used for the location of 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 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records re is a height and backscatter error for Retracker 2 and a height error for Retracker 3 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 ecords There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 for one or more There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records There is a height and backscatter error for Retracker 2 for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode and no DEM or Slope Model was used for one or more records An ambiguous angle was detected for SARIn mode and no DEM or Slope Model was used for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode and no DEM or Slope Model was used for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode and no DEM or Slope Model was used for one or more records An ambiguous angle was detected for SARIn mode for one or more ecords An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records An ambiguous angle was detected for SARIn mode for one or more records

CS_OFFL_SIR_SIN_220170715T200537_20170715T200653_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_220170715T205103_20170715T205238_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_220170715T210023_20170715T210207_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_220170715T214053_20170715T214606_C001	SARIn X-track Angle Error, Surface Model Unavailable	An ambiguous angle was detected for SARIn mode and no DEM or Slope Model was used for one or more records
CS_OFFL_SIR_SIN_220170715T223019_20170715T223203_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_220170715T223849_20170715T224501_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_220170715T232053_20170715T232452_C001		An ambiguous angle was detected for SARIn mode and no DEM or Slope Model was used 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	Nb. Products	Nb. QCC Reports	Nb. Valid	Nb. Warnings	Nb. Errors
SIR_LRM_1B	134	134	134	0	0
SIR_LRM_2	131	131	131	0	0
SIR_LRMI2_	131	131	131	0	0
SIR_SAR_1B	96	96	96	0	0
SIR_SAR_2	96	96	96	0	0
SIR_SARI2_	96	96	96	0	0
SIR_SIN_1B	99	99	99	0	0
SIR_SIN_2	99	99	99	0	0
SIR_SINI2	99	99	99	0	0
SIR_GDR_2	13	13	13	0	0

6.1 QCC Errors		
Number of products with QCC errors:	0	
6.2 QCC Warnings		
Number of QCC reports with warnings	0	
6.2 Missing QCC Reports		
Number of products with missing QCC reports:	186	