



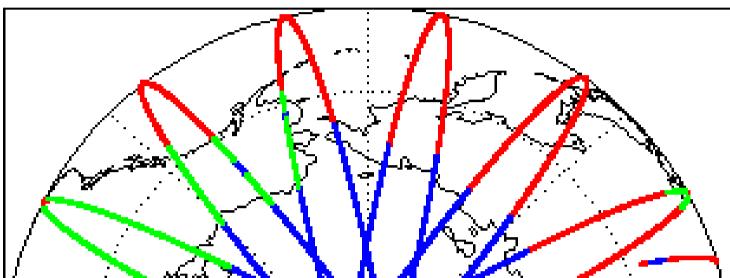
1. Overview

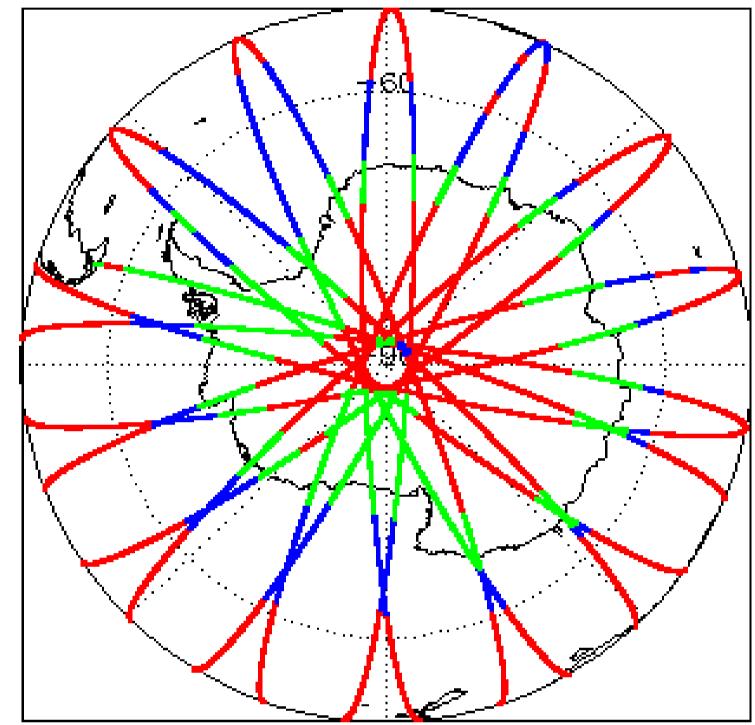
Report Production Date:	21-Jul-2021
Processor Used:	CryoSat Ice Processor
Data Used:	L1B and L2 OFFLINE Data

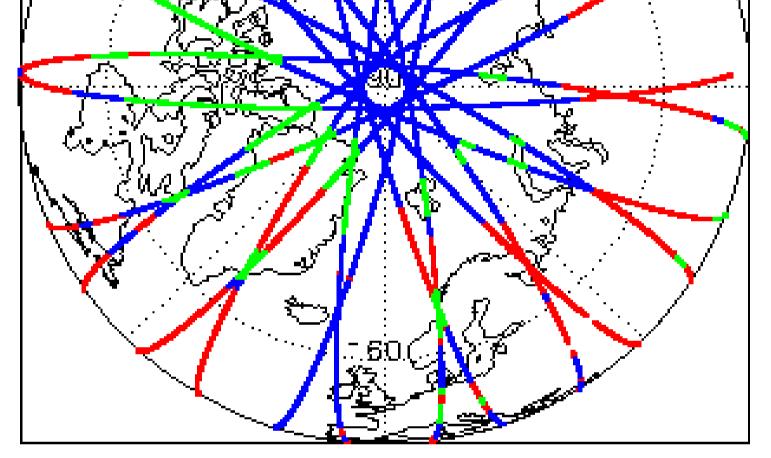
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Star Tracker Usage Check	Nominal
L1B Tracking Flag Check	See Section 4.4
L1B Calibration Usage Check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

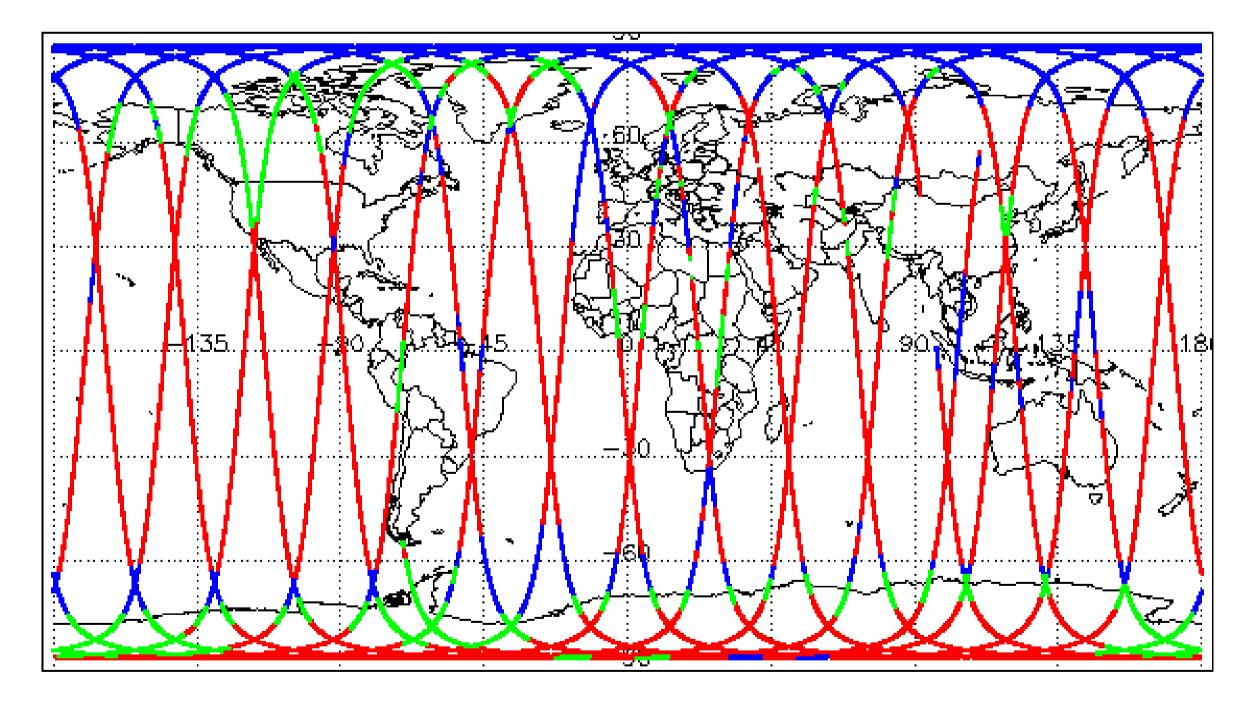
Mission / II	Mission / Instrument News	
20-Jun-20	21 None	
21-Jun-20	21 None	
22-Jun-20	21 Nothing planned	

2. Global Coverage





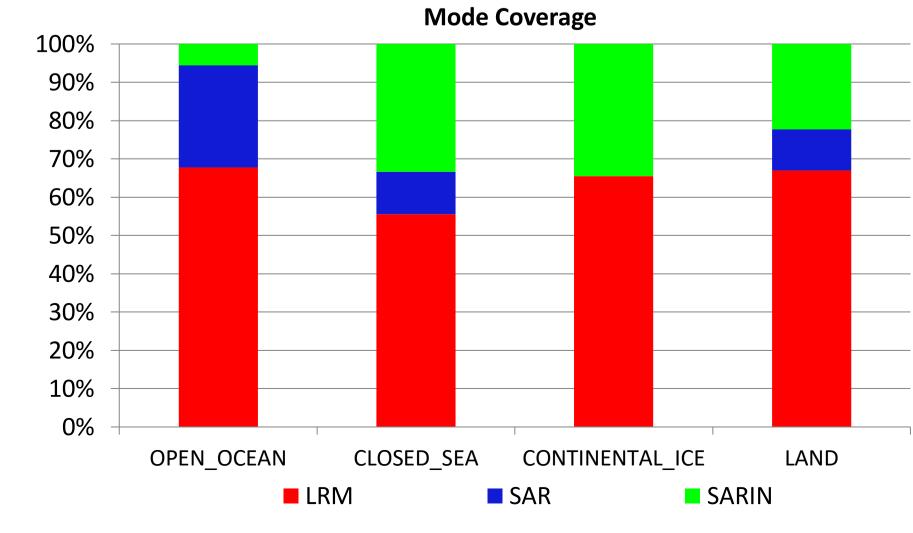


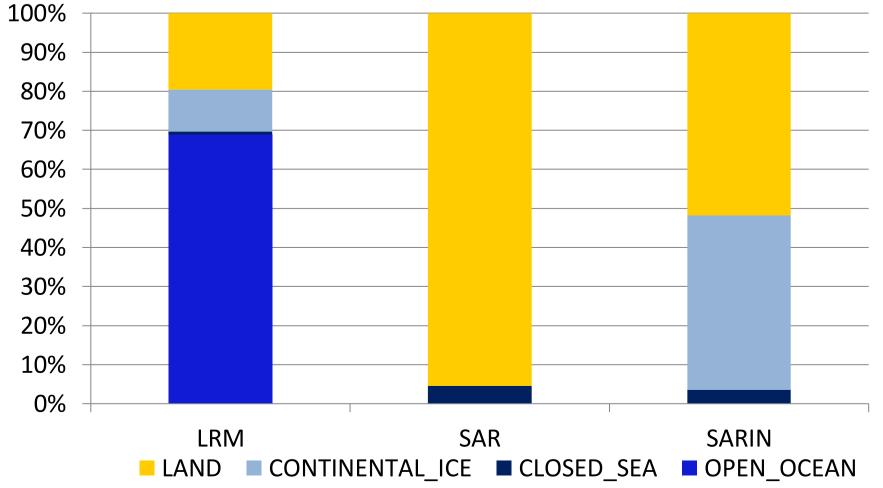




LRM	67.2
SAR	20.6
SARIn	12.2

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	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	ysis	
For all products, a series of pre-defined che	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	a valid star tracker file has beer	used in processing.
Number of products with errors:	0	
4.4 L1B Tracking Flags Chec	k	
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 s	et for some products over land, l	out this is to be expected.

Number of products with errors:

83

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20210620T235539_20210620T235951_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T000032_20210621T000135_D001	Loss of echo	The tracking echo is missing for one or more records

Loss of echo

CS_OFFL_SIR_LRM_1B_20210621T000137_20210621T000912_D001 CS_OFFL_SIR_LRM_1B_20210621T004735_20210621T011305_D001 CS_OFFL_SIR_LRM_1B_20210621T011358_20210621T012048_D001 CS_OFFL_SIR_LRM_1B_20210621T013418_20210621T014052_D001 CS_OFFL_SIR_LRM_1B_20210621T014125_20210621T014127_D001 CS_OFFL_SIR_LRM_1B_20210621T014129_20210621T014134_D001 CS_OFFL_SIR_LRM_1B_20210621T014136_20210621T014152_D001 CS_OFFL_SIR_LRM_1B_20210621T014701_20210621T020800_D001 CS_OFFL_SIR_LRM_1B_20210621T022613_20210621T025404_D001 CS_OFFL_SIR_LRM_1B_20210621T031525_20210621T032051_D001 CS_OFFL_SIR_LRM_1B_20210621T032157_20210621T032318_D001 CS_OFFL_SIR_LRM_1B_20210621T032321_20210621T032447_D001 CS_OFFL_SIR_LRM_1B_20210621T032450_20210621T032511_D001 CS_OFFL_SIR_LRM_1B_20210621T032515_20210621T032554_D001 CS_OFFL_SIR_LRM_1B_20210621T032556_20210621T032559_D001 CS_OFFL_SIR_LRM_1B_20210621T032602_20210621T032607_D001 CS_OFFL_SIR_LRM_1B_20210621T032609_20210621T032710_D001 CS_OFFL_SIR_LRM_1B_20210621T032712_20210621T035049_D001 CS_OFFL_SIR_LRM_1B_20210621T045259_20210621T045600_D001 CS_OFFL_SIR_LRM_1B_20210621T045613_20210621T045838_D001 CS_OFFL_SIR_LRM_1B_20210621T045911_20210621T045949_D001 CS_OFFL_SIR_LRM_1B_20210621T050137_20210621T050253_D001 CS_OFFL_SIR_LRM_1B_20210621T050434_20210621T050609_D001 CS_OFFL_SIR_LRM_1B_20210621T050714_20210621T051016_D001 CS_OFFL_SIR_LRM_1B_20210621T051154_20210621T051211_D001 CS_OFFL_SIR_LRM_1B_20210621T051541_20210621T052216_D001 The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20210621T063742_0210621T064837_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T071241_02010621T071747_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T072425_02010621T098030_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T090426_02010621T091602_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T09173_20210621T091842_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T09173_20210621T091929_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T091931_20210621T091929_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T091931_20210621T092113_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T092554_20210621T09254_0001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T01209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T104337_20210621T10356_021001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_	CS_OFFL_SIR_LRM_1B_20210621T063458_20210621T063524_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T071241_20210621T071747_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T072425_20210621T080030_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T090426_20210621T091602_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T091723_20210621T091842_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T091844_20210621T091929_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T091931_20210621T091929_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T091931_20210621T092113_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T092554_20210621T094018_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001Loss of echoThe tracking echo is missing for one or more records	CS_OFFL_SIR_LRM_1B_20210621T063742_20210621T063841_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T072425_20210621T080030_D001 CS_OFFL_SIR_LRM_1B_20210621T090426_20210621T091602_D001 CS_OFFL_SIR_LRM_1B_20210621T091723_20210621T091842_D001 CS_OFFL_SIR_LRM_1B_20210621T091844_20210621T091929_D001 Loss of echo CS_OFFL_SIR_LRM_1B_20210621T091931_20210621T091929_D001 Loss of echo CS_OFFL_SIR_LRM_1B_20210621T091931_20210621T092113_D001 Coss of echo CS_OFFL_SIR_LRM_1B_20210621T092554_20210621T094018_D001 CS_OFFL_SIR_LRM_1B_20210621T092554_20210621T094018_D001 Loss of echo CS_OFFL_SIR_LRM_1B_20210621T0920201621T102632_D001 Loss of echo CS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001 Loss of echo CS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001 Loss of echo CS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001 Loss of echo CS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001 Loss of echo CS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001 CS_OFFL_SIR_LRM_1B_20210621T09104 CS_OFFL_SIR_LRM_1B_20210621T10358_20210621T091604 CS_OFFL_SIR_LRM_1B_2005 CS_OFFL	CS_OFFL_SIR_LRM_1B_20210621T064209_20210621T064837_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T090426_20210621T091602_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T091723_20210621T091842_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T091844_20210621T091929_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T09131_20210621T09131_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T092554_20210621T094018_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001Loss of echoThe tracking echo is missing for one or more records	CS_OFFL_SIR_LRM_1B_20210621T071241_20210621T071747_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T091723_20210621T091842_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T091844_20210621T091929_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T091931_20210621T092113_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T092554_20210621T094018_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T10358_20210621T103604_D001Loss of echoThe tracking echo is missing for one or more records	CS_OFFL_SIR_LRM_1B_20210621T072425_20210621T080030_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T091844_20210621T091929_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T091931_20210621T092113_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T092554_20210621T094018_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001Loss of echoThe tracking echo is missing for one or more records	CS_OFFL_SIR_LRM_1B_20210621T090426_20210621T091602_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T091931_20210621T092113_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T092554_20210621T094018_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001Loss of echoThe tracking echo is missing for one or more records	CS_OFFL_SIR_LRM_1B_20210621T091723_20210621T091842_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T092554_20210621T094018_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001 Loss of echo The tracking echo is missing for one or more records CS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001 Loss of echo The tracking echo is missing for one or more records	CS_OFFL_SIR_LRM_1B_20210621T091844_20210621T091929_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001Loss of echoThe tracking echo is missing for one or more recordsCS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001Loss of echoThe tracking echo is missing for one or more records	CS_OFFL_SIR_LRM_1B_20210621T091931_20210621T092113_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001 Loss of echo The tracking echo is missing for one or more records	CS_OFFL_SIR_LRM_1B_20210621T092554_20210621T094018_D001	Loss of echo	The tracking echo is missing for one or more records
	CS_OFFL_SIR_LRM_1B_20210621T101209_20210621T102632_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T104317_20210621T105603_D001 Loss of echo The tracking echo is missing for one or more records	CS_OFFL_SIR_LRM_1B_20210621T103358_20210621T103604_D001	Loss of echo	The tracking echo is missing for one or more records
	CS_OFFL_SIR_LRM_1B_20210621T104317_20210621T105603_D001	Loss of echo	The tracking echo is missing for one or more records

CS_OFFL_SIR_LRM_1B_20210621T110021_20210621T110942_D001 CS_OFFL_SIR_LRM_1B_20210621T111157_20210621T112002_D001 CS_OFFL_SIR_LRM_1B_20210621T113407_20210621T113556_D001 CS_OFFL_SIR_LRM_1B_20210621T113641_20210621T114909_D001 CS_OFFL_SIR_LRM_1B_20210621T125204_20210621T125225_D001 CS_OFFL_SIR_LRM_1B_20210621T125227_20210621T125244_D001 CS_OFFL_SIR_LRM_1B_20210621T125247_20210621T125915_D001 CS OFFL SIR LRM 1B 20210621T131416 20210621T132027 D001 CS_OFFL_SIR_LRM_1B_20210621T132107_20210621T134717_D001 CS_OFFL_SIR_LRM_1B_20210621T135326_20210621T135843_D001 CS_OFFL_SIR_LRM_1B_20210621T142901_20210621T142917_D001 CS_OFFL_SIR_LRM_1B_20210621T143000_20210621T143557_D001 CS OFFL SIR LRM 1B 20210621T143557 20210621T143716 D001 CS_OFFL_SIR_LRM_1B_20210621T145808_20210621T145812_D001 CS OFFL SIR LRM 1B 20210621T145814 20210621T145815 D001 CS_OFFL_SIR_LRM_1B_20210621T145820_20210621T145902_D001 CS_OFFL_SIR_LRM_1B_20210621T145904_20210621T152601_D001 CS_OFFL_SIR_LRM_1B_20210621T154123_20210621T160937_D001 CS_OFFL_SIR_LRM_1B_20210621T160942_20210621T160951_D001 CS_OFFL_SIR_LRM_1B_20210621T160956_20210621T161005_D001 CS_OFFL_SIR_LRM_1B_20210621T161007_20210621T161236_D001 CS_OFFL_SIR_LRM_1B_20210621T161309_20210621T161830_D001 CS_OFFL_SIR_LRM_1B_20210621T172814_20210621T173746_D001 CS_OFFL_SIR_LRM_1B_20210621T173808_20210621T174308_D001 CS_OFFL_SIR_LRM_1B_20210621T174918_20210621T175033_D001

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_20210621T175044_20210621T175120_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T175120_20210621T175213_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T175452_20210621T175506_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T192124_20210621T192522_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T192525_20210621T192551_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T192658_20210621T192832_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T194737_20210621T202303_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T212609_20210621T214045_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T214527_20210621T214738_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T214823_20210621T220243_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T222023_20210621T223346_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T223600_20210621T223716_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T223754_20210621T224917_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T230511_20210621T231229_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T231524_20210621T232412_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T232415_20210621T232417_D001	Loss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210621T232419_20210621T232548_D001	Loss of echo	The tracking echo is missing for one or more records
A E LAD Calibratian Llagra Chaok		

Loss of echo

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:

0

0

0

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:

3

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20210621T113407_20210621T113556_D001	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_20210621T161309_20210621T161830_D001	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_20210621T175120_20210621T175213_D001	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). Number of products with errors: 0		

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

0

0

0

Product	Test Failed	Description
CS_OFFL_SIR_LRM_220210621T000137_20210621T000912_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210621T001728_20210621T003154_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_220210621T004735_20210621T011305_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_220210621T014701_20210621T020800_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_220210621T022613_20210621T025404_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_220210621T032609_20210621T032710_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_220210621T032712_20210621T035049_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_220210621T040605_20210621T043959_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_220210621T045259_20210621T045600_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_220210621T050137_20210621T050253_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210621T052829_20210621T052945_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_220210621T054540_20210621T062028_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_220210621T063133_20210621T063318_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_220210621T063338_20210621T063343_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_220210621T065102_20210621T070818_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_220210621T072425_20210621T080030_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_220210621T082240_20210621T084522_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_220210621T090426_20210621T091602_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_220210621T091723_20210621T091842_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_220210621T091844_20210621T091929_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_220210621T091931_20210621T092113_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_220210621T092554_20210621T094018_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_220210621T095320_20210621T101011_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_220210621T101209_20210621T102632_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_220210621T104317_20210621T105603_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_220210621T105722_20210621T105820_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_220210621T110021_20210621T110942_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_220210621T113407_20210621T113556_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210621T113641_20210621T114909_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_220210621T115437_20210621T120721_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_220210621T122245_20210621T123826_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_220210621T125247_20210621T125915_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210621T132107_20210621T134717_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_220210621T140249_20210621T142637_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_220210621T145904_20210621T152601_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_220210621T154123_20210621T160937_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_220210621T161309_20210621T161830_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_220210621T163207_20210621T170442_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_220210621T175554_20210621T175602_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_220210621T175612_20210621T175905_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_220210621T181102_20210621T182006_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_220210621T182250_20210621T184438_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
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CS_OFFL_SIR_LRM_220210621T190033_20210621T191758_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_220210621T194737_20210621T202303_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_220210621T204209_20210621T211327_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_220210621T212609_20210621T214045_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_220210621T214527_20210621T214738_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_220210621T214823_20210621T220243_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_220210621T222023_20210621T223346_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_220210621T223600_20210621T223716_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_220210621T223754_20210621T224917_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_220210621T225106_20210621T225223_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_220210621T231524_20210621T232412_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_220210621T232419_20210621T232548_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_220210621T232727_20210621T234135_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	149	149	149	0	0
SIR_SAR_1B	106	106	106	0	0
SIR_SIN_1B	95	95	95	0	0
SIR_LRM_2	149	149	145	4	0
SIR_SAR_2	95	106	106	0	0
SIR_SIN_2	106	95	95	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	-			

Test Description Key	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)				

Number of QCC reports with warnings

4

0

Total number of occurrences of each warning

Product Type	AXSMMEOCI	-	-	-	-	-	-
SIR_LRM_2_	4						

Test Description Key:					
Abbreviation	Test name	Details			
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: