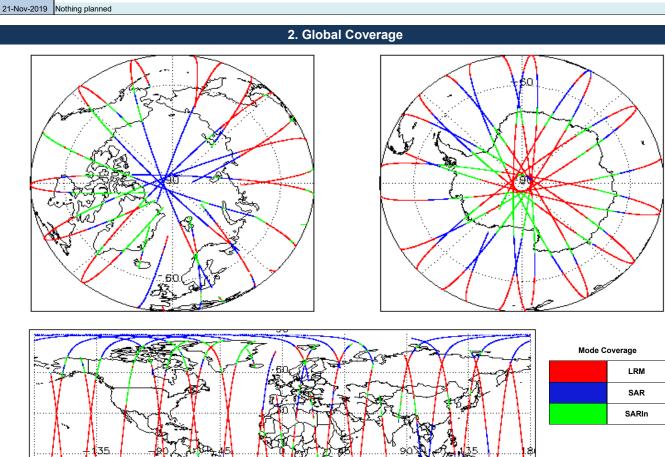


## IDEAS+ Daily Report for NOP data:

## <u>20/11/2019</u>

1. Overview				
Report Production:	21-Nov-2019	Check	L1 & L2	
Report Froduction.	21-1107-2019	Server check: science-pds.cryosat.esa.int	Nominal	
Processor Used:	CryoSat Ocean Processor	Server check: calval-pds.cryosat.esa.int	Nominal	
Processor Used.	CryoSal Ocean Processor	Product Software Check	Nominal	
Data Used:	Near Real Time Ocean Products (NOP)	Product Format Check	Nominal	
Data Used:	L1B & L2 Science Data	Product Header Analysis	See Sections 4.2 and 5.2	
	<u>.</u>	Auxiliary Data File Usage Check	See Section 4.3 and 5.3	
		Auxiliary Correction Error Check	See Section 5.4	
		Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5	
		Measurement Quality Flag Check	See Section 5.6	
		Ocean Retracking Quality Check	See Section 5.7	

# Mission / Instrument News 19-Nov-2019 None 20-Nov-2019 None



## 3. Instrument Configuration

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

SIRAL instrument(s) in use:

SIRAL - A

4. NOP Level 1B Data Quality Check

## 4.1 L1B Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a binary product file (.DBL).

Number of products with errors:

0

4.2 L1B Product Header Analysis			
For all products, a series of pre-defined checks are performed on the MPH and	d SPH in order to identify any inconsist	encies and/or errors raised by the ground-segment processing chain.	
L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1B IOPR and IOPN products because the I1b_processing_quality_hr field is not correctly configured in the OSAR and OSARIn chains. A modification is required in the next release.			
Number of products with errors: 0			
4.3 L1B Auxilary Data File Usage Check			
Each product is checked for missing Data Set Descriptors with respect to a pre	e-determined baseline and also to chec	sk the validity of Auxiliary Data Files is correct.	
Dynamic Atmospheric Correction: The DAC is missing in all products because the auxiliary files required are not available in time for processing. This known and expected behaviour.			
Number of products with errors: 0			
4.4 L1B Auxiliary Correction Error Check			
CryoSat L1B data includes a correction error flag for each measurement record	d. The bit value of this flag indicates ar	ny problems when set.	
Number of products with errors: 0			
4.5 L1B Measurement Confidence Data Check			
CryoSat L1B data includes a measurement confidence flag for each measurem	nent record. The bit value of this flag in	idicates any problems when set.	
Attitude Correction Missing: This flag is currently set in error for NOPR pro	-		
Number of products with errors: 1	<b>3</b>		
	Toot Failed	Description	
	Test Failed	Description There is an error in the scaling of the L1B waveform for one or more	
CS_OFFL_SIR_NOPM1B_20191120T174325_20191120T181706_C001	Power scaling error	records	
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this is	-	y problems when set.	
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this laumber of products with errors: 22	-	y problems when set. Description	
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this is lumber of products with errors: 22 Product	is to be expected.		
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this is lumber of products with errors: 22 Product CS_OFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001	is to be expected. Test Failed	Description	
CryoSat L1B data includes a waveform data flag for each measurement record         Loss of Echo Flag: This flag is currently set for products over land, but this is         Jumber of products with errors:       22         Product         CS_OFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         CS_OFFL_SIR_NOPM1B_20191120T075551_20191120T081958_C001	is to be expected. Test Failed Loss of Echo	Description The tracking echo is missing for one or more records	
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this is lumber of products with errors: 22 Product CS_OFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001 CS_OFFL_SIR_NOPM1B_20191120T075551_20191120T081958_C001 CS_OFFL_SIR_NOPM1B_20191120T153025_20191120T153949_C001	is to be expected.           Test Failed           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records	
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this l Number of products with errors: 22 Product CS_OFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001 CS_OFFL_SIR_NOPM1B_20191120T075551_20191120T081958_C001 CS_OFFL_SIR_NOPM1B_20191120T153025_20191120T153949_C001 CS_OFFL_SIR_NOPM1B_20191120T160231_20191120T161853_C001	is to be expected.           Test Failed           Loss of Echo           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records	
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this is Number of products with errors: 22 Product CS_OFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001 CS_OFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001 CS_OFFL_SIR_NOPM1B_20191120T153025_20191120T153949_C001 CS_OFFL_SIR_NOPM1B_20191120T160231_20191120T161853_C001 CS_OFFL_SIR_NOPM1B_20191120T000709_20191120T001125_C001	is to be expected.           Test Failed           Loss of Echo           Loss of Echo           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is lumber of products with errors:         22           Product         22           Product         22           S_OFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         25           CS_OFFL_SIR_NOPM1B_20191120T075551_20191120T081958_C001         25           CS_OFFL_SIR_NOPM1B_20191120T153025_20191120T153949_C001         25           CS_OFFL_SIR_NOPM1B_20191120T160231_20191120T161853_C001         25           CS_OFFL_SIR_NOPM1B_20191120T000709_20191120T001125_C001         25           COFFL_SIR_NOPN1B_20191120T0005637_20191120T005850_C001         25	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is lumber of products with errors:         22           Product         22           Sc_OFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         23           CS_OFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         25           Sc_OFFL_SIR_NOPM1B_20191120T153025_20191120T153949_C001         25           CS_OFFL_SIR_NOPM1B_20191120T160231_20191120T161853_C001         25           CS_OFFL_SIR_NOPM1B_20191120T100231_20191120T01125_C001         25           COFFL_SIR_NOPN1B_20191120T005637_20191120T001125_C001         25           COFFL_SIR_NOPN1B_20191120T005637_20191120T005850_C001         25           COFFL_SIR_NOPN1B_20191120T041640_20191120T041852_C001         25	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is           Jumber of products with errors:         22           Product         22           SOFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         25           COFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         25           CS_OFFL_SIR_NOPM1B_20191120T153025_20191120T161853_C001         25           CS_OFFL_SIR_NOPM1B_20191120T160231_20191120T0161853_C001         25           COFFL_SIR_NOPM1B_20191120T000709_20191120T001125_C001         25           CS_OFFL_SIR_NOPN1B_20191120T005637_20191120T005850_C001         25           CS_OFFL_SIR_NOPN1B_20191120T041640_20191120T041852_C001         25           CS_OFFL_SIR_NOPN1B_20191120T041640_20191120T10106_C001         25	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this laumber of products with errors:         22           Product         22           SoFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         25           SS_OFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         25           SS_OFFL_SIR_NOPM1B_20191120T153025_20191120T153949_C001         25           CS_OFFL_SIR_NOPM1B_20191120T160231_20191120T061853_C001         25           SS_OFFL_SIR_NOPM1B_20191120T000709_20191120T001125_C001         25           SOFFL_SIR_NOPN1B_20191120T005637_20191120T005850_C001         25           SS_OFFL_SIR_NOPN1B_20191120T041640_20191120T041852_C001         25           SS_OFFL_SIR_NOPN1B_20191120T041640_20191120T10106_C001         25           SS_OFFL_SIR_NOPN1B_20191120T110040_20191120T110106_C001         25           SS_OFFL_SIR_NOPN1B_20191120T141748_20191120T142233_C001         25	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is lumber of products with errors:         22           Product         22           Product         22           SopFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         25           SoFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         25           SopFL_SIR_NOPM1B_20191120T153025_20191120T153949_C001         25           SopFL_SIR_NOPM1B_20191120T160231_20191120T061853_C001         25           SopFL_SIR_NOPM1B_20191120T000709_20191120T001125_C001         25           SopFL_SIR_NOPN1B_20191120T005637_20191120T005850_C001         25           SopFL_SIR_NOPN1B_20191120T10040_20191120T041852_C001         25           SopFL_SIR_NOPN1B_20191120T10040_20191120T10106_C001         25           SopFL_SIR_NOPN1B_20191120T141748_20191120T142233_C001         25           SopFL_SIR_NOPN1B_20191120T141748_20191120T1455801_C001         25	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is lumber of products with errors:         22           Product         22           Product         23           SOFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         25           SOFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         25           SS_OFFL_SIR_NOPM1B_20191120T153025_20191120T153949_C001         25           SS_OFFL_SIR_NOPM1B_20191120T160231_20191120T061853_C001         25           SS_OFFL_SIR_NOPM1B_20191120T005637_20191120T005850_C001         25           SS_OFFL_SIR_NOPN1B_20191120T041640_20191120T041852_C001         25           SOFFL_SIR_NOPN1B_20191120T10040_20191120T10106_C001         25           SS_OFFL_SIR_NOPN1B_20191120T1101040_20191120T110106_C001         25           SS_OFFL_SIR_NOPN1B_20191120T141748_20191120T142233_C001         25           SS_OFFL_SIR_NOPN1B_20191120T141748_20191120T142001         25	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is the product over land, but the product over	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is lumber of products with errors:         22           Product         22           ScOFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         33           ScOFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         33           ScOFFL_SIR_NOPM1B_20191120T153025_20191120T161853_C001         33           ScOFFL_SIR_NOPM1B_20191120T100231_20191120T161853_C001         33           ScOFFL_SIR_NOPM1B_20191120T000709_20191120T001855_C001         33           ScOFFL_SIR_NOPN1B_20191120T005637_20191120T001855_C001         33           ScOFFL_SIR_NOPN1B_20191120T005637_20191120T001852_C001         33           ScOFFL_SIR_NOPN1B_20191120T01640_20191120T041852_C001         33           ScOFFL_SIR_NOPN1B_20191120T110040_20191120T10106_C001         35           ScOFFL_SIR_NOPN1B_20191120T110040_20191120T142233_C001         35           ScOFFL_SIR_NOPN1B_20191120T135652_20191120T155801_C001         35           ScOFFL_SIR_NOPN1B_20191120T173609_20191120T174202_C001         35           ScOFFL_SIR_NOPN1B_20191120T191057_20191120T191129_C001         35           ScOFFL_SIR_NOPN1B_20191120T191057_20191120T191129_C001         35	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records	
StryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is           Iumber of products with errors:         22           roduct         22           roduct         23           S_OFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         33           S_OFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         33           S_OFFL_SIR_NOPM1B_20191120T160231_20191120T161853_C001         33           S_OFFL_SIR_NOPM1B_20191120T000709_20191120T001125_C001         33           S_OFFL_SIR_NOPN1B_20191120T0005637_20191120T005800_C001         33           S_OFFL_SIR_NOPN1B_20191120T101040_20191120T041852_C001         33           S_OFFL_SIR_NOPN1B_20191120T101040_20191120T10106_C001         33           S_OFFL_SIR_NOPN1B_20191120T110040_20191120T110106_C001         33           S_OFFL_SIR_NOPN1B_20191120T141748_20191120T142233_C001         33           S_OFFL_SIR_NOPN1B_20191120T141748_20191120T142233_C001         33           S_OFFL_SIR_NOPN1B_20191120T141748_20191120T142233_C001         33           S_OFFL_SIR_NOPN1B_20191120T141748_20191120T142233_C001         33           S_OFFL_SIR_NOPN1B_20191120T13069_20191120T142233_C001         33           S_OFFL_SIR_NOPN1B_20191120T13069_20191120T142233_C001         33           S_OFFL_SIR_NOPN1B_20191120T1	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records	
StryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is           Iumber of products with errors:         22           roduct         22           roduct         23           SOFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         25           SOFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         25           SS_OFFL_SIR_NOPM1B_20191120T160231_20191120T161853_C001         25           SS_OFFL_SIR_NOPM1B_20191120T160231_20191120T01125_C001         25           SS_OFFL_SIR_NOPM1B_20191120T005637_20191120T0018550_C001         25           SS_OFFL_SIR_NOPN1B_20191120T1005637_20191120T10106_C001         25           SS_OFFL_SIR_NOPN1B_20191120T110040_20191120T1041852_C001         25           SS_OFFL_SIR_NOPN1B_20191120T110040_20191120T142233_C001         25           SS_OFFL_SIR_NOPN1B_20191120T141748_20191120T142233_C001         25           SS_OFFL_SIR_NOPN1B_20191120T13609_20191120T174202_C001         25           SS_OFFL_SIR_NOPN1B_20191120T13609_20191120T174202_C001         25           SS_OFFL_SIR_NOPN1B_20191120T13609_20191120T174202_C001         25           SS_OFFL_SIR_NOPN1B_20191120T13609_20191120T191120_C001         25           SOFFL_SIR_NOPN1B_20191120T13609_20191120T191120T1091424_C001         25           SS_OFFL_SIR_NO	is to be expected.           Test Failed           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is the products over land, but this is the product over land, but the product ove	is to be expected.           Test Failed           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is lumber of products with errors:         22           Product         22           Product         23           SopFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         25           SopFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         25           SopFFL_SIR_NOPM1B_20191120T153025_20191120T153949_C001         25           SopFFL_SIR_NOPM1B_20191120T160231_20191120T01125_C001         25           SopFFL_SIR_NOPM1B_20191120T000709_20191120T001125_C001         25           SopFFL_SIR_NOPN1B_20191120T0005637_20191120T001850_C001         25           SopFFL_SIR_NOPN1B_20191120T10040_20191120T10106_C001         25           SopFFL_SIR_NOPN1B_20191120T1101040_20191120T142233_C001         25           SopFFL_SIR_NOPN1B_20191120T155652_20191120T155801_C001         25           SopFFL_SIR_NOPN1B_20191120T173609_20191120T174202_C001         25           SopFFL_SIR_NOPN1B_20191120T173609_20191120T174202_C001         25           SopFFL_SIR_NOPN1B_20191120T173609_20191120T174202_C001         25           SopFFL_SIR_NOPN1B_20191120T033508_20191120T1020247_C001         25           SopFFL_SIR_NOPN1B_20191120T015631_20191120T033958_C001         25           SopFFL_SIR_NOPR1B_20191120T033506_20191120T033958_C001	Test Failed         Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo	
A.6 L1B Waveform Group Data Check           CryoSat L1B data includes a waveform data flag for each measurement record           > Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         22           Product         2           CS_OFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         2           CS_OFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         2           CS_OFFL_SIR_NOPM1B_20191120T160231_20191120T16853_C001         2           CS_OFFL_SIR_NOPM1B_20191120T000709_20191120T01125_C001         2           CS_OFFL_SIR_NOPN1B_20191120T005637_20191120T001850_C001         2           CS_OFFL_SIR_NOPN1B_20191120T005637_20191120T014852_C001         2           CS_OFFL_SIR_NOPN1B_20191120T10006037_20191120T10106_C001         2           CS_OFFL_SIR_NOPN1B_20191120T110040_20191120T1041852_C001         2           CS_OFFL_SIR_NOPN1B_20191120T135652_20191120T142233_C001         2           CS_OFFL_SIR_NOPN1B_20191120T13569_20191120T14223_C001         2           CS_OFFL_SIR_NOPN1B_20191120T13609_20191120T14202_C001         2           CS_OFFL_SIR_NOPN1B_20191120T135652_20191120T14202_C001         2           CS_OFFL_SIR_NOPN1B_20191120T01827_20191120T002222_C001         2           CS_OFFL_SIR_NOPN1B_20191120T001827_20191120T033958_C001         2           CS_OFFL_SIR_NOPR1B_20191	Test Failed         Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is unmeer of products with errors:         22           Product         22           Product         22           Product         22           Product         23           OS_OFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         25           CS_OFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         25           CS_OFFL_SIR_NOPM1B_20191120T153025_20191120T16853_C001         25           CS_OFFL_SIR_NOPM1B_20191120T000709_20191120T01125_C001         25           CS_OFFL_SIR_NOPN1B_20191120T005637_20191120T001850_C001         25           CS_OFFL_SIR_NOPN1B_20191120T005637_20191120T0141852_C001         25           CS_OFFL_SIR_NOPN1B_20191120T1041640_20191120T1041852_C001         25           CS_OFFL_SIR_NOPN1B_20191120T110040_20191120T1041852_C001         25           CS_OFFL_SIR_NOPN1B_20191120T135652_20191120T142233_C001         25           CS_OFFL_SIR_NOPN1B_20191120T135652_20191120T142233_C001         25           CS_OFFL_SIR_NOPN1B_20191120T13609_20191120T174202_C001         25           CS_OFFL_SIR_NOPN1B_20191120T191057_20191120T1002222_C001         25           CS_OFFL_SIR_NOPN1B_20191120T001827_20191120T002222_C001         25           CS_OFFL_SIR_NOPR1B_20191120T0	Test Failed         Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo	
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this is unmber of products with errors:         22           Product         22           Product         22           Product         22           Product         23           OFFL_SIR_NOPM1B_20191120T035644_20191120T041255_C001         25           CS_OFFL_SIR_NOPM1B_20191120T05551_20191120T081958_C001         25           CS_OFFL_SIR_NOPM1B_20191120T160231_20191120T161853_C001         25           CS_OFFL_SIR_NOPM1B_20191120T000709_20191120T01125_C001         25           CS_OFFL_SIR_NOPN1B_20191120T005637_20191120T0018550_C001         25           CS_OFFL_SIR_NOPN1B_20191120T041640_20191120T1041852_C001         25           CS_OFFL_SIR_NOPN1B_20191120T10040_20191120T1041852         2001           CS_OFFL_SIR_NOPN1B_20191120T101040_20191120T1041852         2001           CS_OFFL_SIR_NOPN1B_20191120T1101040_20191120T1041852         2001           CS_OFFL_SIR_NOPN1B_20191120T1101040_20191120T1041852         2001           CS_OFFL_SIR_NOPN1B_20191120T1101040_20191120T1142233_C001         25           CS_OFFL_SIR_NOPN1B_20191120T173609_20191120T174202_C001         25           CS_OFFL_SIR_NOPN1B_20191120T103506_20191120T174202_C001         25           CS_OFFL_SIR_NOPN1B_20191120T01827_2019	Test Failed         Loss of Echo	DescriptionThe tracking echo is missing for one or more recordsThe tracking echo is missing for one or m	

#### 5. NOP Level 2 Data Quality Check

#### 5.1 L2 Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a binary product file (.DBL).

0

Number of products with errors:

## 5.2 L2 Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. Number of products with errors: 0

### 5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

#### 5.4 L2 Auxiliary Correction Error Check

For all products, the auxiliary corrections within the Geophysical Group are checked for the default error value (32767).

0

Currently, there are some common auxiliary correction errors raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.

> ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Corection, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update.

> Mean Sea Surface: The error value is currently set for products over land and sea ice, but this is to be expected.

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> Mean Dynamic Topography: The error value is currently set for products over land and sea ice, but this is to be expected.

> Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20191120T035644_20191120T041255_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPM_2_20191120T192818_20191120T195526_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20191120T000709_20191120T001125_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T001703_20191120T001826_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T005637_20191120T005850_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T015446_20191120T015631_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20191120T023301_20191120T023421_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20191120T023845_20191120T023938_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T033245_20191120T033506_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T041440_20191120T041551_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and the tidal corrections for one or more records
CS_OFFL_SIR_NOPN_2_20191120T041640_20191120T041852_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T050256_20191120T050500_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20191120T051143_20191120T051616_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20191120T055322_20191120T055442_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T060232_20191120T060304_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20191120T083200_20191120T083336_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20191120T100207_20191120T100323_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20191120T114124_20191120T114243_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20191120T114752_20191120T115103_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T132217_20191120T132456_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T132655_20191120T133226_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T141748_20191120T142233_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T150128_20191120T150403_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T155652_20191120T155801_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T173609_20191120T174202_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T181855_20191120T182044_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20191120T182854_20191120T183118_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20191120T191620_20191120T192029_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and the tidal corrections for one or more records
CS_OFFL_SIR_NOPN_2_20191120T205818_20191120T210234_C001	Mean Sea Surface (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T213830_20191120T214202_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T221658_20191120T221836_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records

CS_OFFL_SIR_NOPN_2_20191120T231744_20191120T232105_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20191120T232617_20191120T232741_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPR_2_20191120T010043_20191120T010802_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20191120T023938_20191120T024519_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20191120T041852_20191120T042543_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20191120T055715_20191120T060232_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20191120T093000_20191120T093158_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPR_2_20191120T155017_20191120T155405_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20191120T191129_20191120T191620_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20191120T204901_20191120T205817_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20191120T222917_20191120T223711_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

#### 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors: 1		
Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20191120T174325_20191120T181706_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
5.6.1.2 Massurament Quality Flag Check		

#### 5.6 L2 Measurement Quality Flag Check

#### L2 Quality Flags (20Hz)

CryoSat L2 data includes Quality Flags for each 20 Hz, 20 Hz PLRM and 1 Hz measurement record. The bit value of this flag indicates any problems when set.

Currently, there are several common flags raised in the Level 2 products, which are summarised below. The table provides the full list of products flagged.

> Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags: These flags are currently set for some records over ocean.

> OCOG Altimeter Range and Backscatter Quality Flags: These flags are currently set for some records over continental ice.

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Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20191119T234339_20191120T000454_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T001255_20191120T001703_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T002223_20191120T003209_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T003357_20191120T004115_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T004200_20191120T004632_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T005542_20191120T005607_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T010827_20191120T014348_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T020247_20191120T021518_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T021527_20191120T023301_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T025029_20191120T025142_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T025412_20191120T030610_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T030814_20191120T032323_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T032544_20191120T033043_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T033104_20191120T033115_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_NOPM_2_20191120T035644_20191120T041255_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCCG Altimeter Range and Backscatter Quality, oCCG Altimeter Range and Backscatter Quality, oCCG Altimeter Range and Backscatter Quality, oCCG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T05102_20191120T051054_C001       Ocean Altimeter Range and Backscatter Quality, oCCG Altimeter Range and Backscatter Quality, oCCG       The OCean Altimeter Range and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T05102_20191120T051029_C001       OCCG Altimeter Range Quality, OCCG Backscatter Quality       The OCCG Altimeter Range and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T051036_20191120T051143_C001       OCCG Altimeter Range Quality, OCCG Backscatter Quality       The OCCG Altimeter Range and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T051734_20191120T055108_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The OCCG Altimeter Range and Backscatter Quality Flags have altimeter Range and Backscatter Quality         CS_OFFL_SIR_NOPM_2_20191120T0550_20191120T081958_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCCG Altimeter Range and Backscatter Quality       The OCean Altimeter Range and Backscatter Quality Flags have altimeter Range and Backscatter Quality       The OCean Altimeter Range and Backscatter Quality Flags have alto one or more records.         CS_OFFL_SIR_NOPM_2_20191120T08235_20191120T08285_C001	lags been en set lags been lags been en set lags
CS_OFFL_SIR_NOPM_2_20191120T044812_20191120T050154_C001       and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T051020_20191120T051029_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T051036_20191120T051143_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T051734_20191120T055108_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.       The OCOG Altimeter Range, SSHA, SWH and the OCOG Altimeter Range, SSHA, SWH and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have Altimeter Range and Backscatter Quality.       The OCCG Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T082325_20191120T082825_C001       Ocean Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T083659_20191120T082825_C001       Ocean Altimeter Range Quality, OCOG Backscatter Quality       The OCCG Altimeter Range and Backscatter Qu	en set en set lags been lags been en set
CS_OFFL_SIR_NOPM_2_201911201031020_201911201031029_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T051036_20191120T051143_C001       OCOG Altimeter Range Quality, OCOG       The OCOG Altimeter Range, SSHA, SWH         CS_OFFL_SIR_NOPM_2_20191120T051734_20191120T055108_C001       Ocean Altimeter Range, SSHA, SWH       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_NOPM_2_20191120T05550_20191120T081958_C001       Ocean Altimeter Range, SSHA, SWH       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_NOPM_2_20191120T075550_20191120T081958_C001       Ocean Altimeter Range and Backscatter Quality, OCOG       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T082325_20191120T082825_C001       Ocean Altimeter Range Quality, OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T082325_20191120T082825_C001       OCOG Altimeter Range Quality, OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T083659_20191120T090950_C001       Ocean Altimeter Range, SSHA, SWH       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T083659_20191120T090950_C001       Ocean Altimeter Range, SSHA, SWH       The OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records.	en set lags been lags been en set lags
CS_OFFL_SIR_NOPM_2_201911201051036_201911201051143_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T051036_20191120T055108_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T075550_20191120T081958_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T075550_20191120T081958_C001       Ocean Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T082325_20191120T082825_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The Ocean Altimeter Range and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T083659_20191120T082825_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T083659_20191120T090950_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records.	lags been lags been en set lags
CS_OFFL_SIR_NOPM_2_20191120T051734_20191120T055108_C001       and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T075550_20191120T081958_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T082325_20191120T082825_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T082325_20191120T082825_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T083659_20191120T090950_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality	been lags been en set lags
CS_OFFL_SIR_NOPM_2_20191120T075550_20191120T081958_C001       and Backscatter Quality, OCOG       and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T082325_20191120T082825_C001       OCOG Altimeter Range Quality, OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T082325_20191120T082825_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T083659_20191120T090950_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have and Backscatter Quality, OCOG       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records.	been en set lags
CS_OFFL_SIR_NOPM_2_201911201082325_201911201082825_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_NOPM_2_20191120T083659_20191120T090950_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range and Backscatter Quality Flags have	lags
CS_OFFL_SIR_NOPM_2_20191120T083659_20191120T090950_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have	
	neen
CS_OFFL_SIR_NOPM_2_20191120T092226_20191120T092436_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T093158_20191120T093300_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.	n set
CS_OFFL_SIR_NOPM_2_20191120T093518_20191120T094219_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range and Backscatter Quality Flags have altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T095513_20191120T095805_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T100323_20191120T100856_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.	n set
CS_OFFL_SIR_NOPM_2_20191120T101620_20191120T104853_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T110154_20191120T110308_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T112129_20191120T113704_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T114243_20191120T114752_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.	n set
CS_OFFL_SIR_NOPM_2_20191120T115450_20191120T123037_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T125232_20191120T125652_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T125748_20191120T131524_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T133427_20191120T134910_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality flags have set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T135557_20191120T140737_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T142254_20191120T144047_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, State of one or more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T144213_20191120T145609_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.	
CS_OFFL_SIR_NOPM_2_20191120T150404_20191120T150604_C001 OCOG Altimeter Range Quality, OCOG for one or more records.	n set
CS_OFFL_SIR_NOPM_2_20191120T150711_20191120T151106_C001 OCOG Altimeter Range Quality, OCOG for one or more records.	en set

CS_OFFL_SIR_NOPM_2_20191120T151308_20191120T152824_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T153025_20191120T153949_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T160231_20191120T161853_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T163453_20191120T163728_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T164208_20191120T165008_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T165306_20191120T170731_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T174325_20191120T181706_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T182320_20191120T182854_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T183258_20191120T185641_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T192238_20191120T192300_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T192818_20191120T195526_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T200252_20191120T200730_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T200818_20191120T200847_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T201210_20191120T203944_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T204642_20191120T204901_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T210234_20191120T213352_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T214202_20191120T214734_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T215124_20191120T215521_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T222630_20191120T222917_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T224118_20191120T231409_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T232105_20191120T232617_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20191120T233149_20191120T234800_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T014457_20191120T014624_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T023301_20191120T023421_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T033245_20191120T033506_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T110808_20191120T110830_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

CS OFFE SIR NOPN 2 201911201181855 201911201182044 CO01	0	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T133227_20191120T133427_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

#### L2 Quality Flags (20Hz PLRM)

Currently, there are several common flags raised in the Level 2 products, which are summarised below. The table provides the full list of products flagged.

> Ocean Altimeter Range, SSHA, SWH and Backscatter PLRM Quality Flags: These flags are currently set for occasional records over sea ice.

> OCOG Altimeter Range and Backscatter PLRM Quality Flags: These flags are currently set for occasional records over continental ice.

Number of products with errors: 80

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20191120T005637_20191120T005850_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T024519_20191120T024607_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T035349_20191120T035432_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T035537_20191120T035643_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T041440_20191120T041551_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T041640_20191120T041852_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T051143_20191120T051616_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T055322_20191120T055442_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T082154_20191120T082324_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T091207_20191120T091311_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T094219_20191120T094553_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T100857_20191120T101017_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T110011_20191120T110036_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T110308_20191120T110423_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T110913_20191120T110952_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T111952_20191120T112129_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T114752_20191120T115103_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T132655_20191120T133226_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T141748_20191120T142233_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T151106_20191120T151234_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T155652_20191120T155801_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T155910_20191120T160039_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_NOPN_2_20191120T165008_20191120T165157_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T171716_20191120T172056_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T173609_20191120T174202_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T181855_20191120T182044_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T182252_20191120T182320_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T190941_20191120T191001_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T191620_20191120T192029_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T192115_20191120T192237_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T192300_20191120T192818_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T200112_20191120T200252_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T200730_20191120T200818_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T200847_20191120T201010_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T213830_20191120T214202_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T220603_20191120T220737_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T223712_20191120T223855_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T232617_20191120T232741_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20191120T234800_20191120T235122_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T001827_20191120T002222_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T003210_20191120T003357_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T010043_20191120T010802_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T015147_20191120T015152_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T015159_20191120T015206_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T015631_20191120T020247_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T023938_20191120T024519_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T024608_20191120T024652_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T033506_20191120T033958_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T035432_20191120T035536_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.

	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
CS_OFFL_SIR_NOPR_2_20191120T041852_20191120T042543_C001	Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T043926_20191120T044350_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T044404_20191120T044812_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T055715_20191120T060232_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T061737_20191120T061811_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T081958_20191120T082054_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T093000_20191120T093158_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T093300_20191120T093400_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T101215_20191120T101620_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T110434_20191120T110751_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T110952_20191120T111315_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T113704_20191120T114124_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T115103_20191120T115450_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T131524_20191120T132217_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T141038_20191120T141152_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T142233_20191120T142254_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T144047_20191120T144213_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T145610_20191120T150128_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T152824_20191120T153025_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T155017_20191120T155405_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T171053_20191120T171546_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T181706_20191120T181855_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T190717_20191120T190941_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T195526_20191120T195823_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T204901_20191120T205817_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T213352_20191120T213829_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM Ocean Altimeter Range, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T214850_20191120T215124_C001	and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_NOPR_2_20191120T222210_20191120T222522_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T222917_20191120T223711_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T223855_20191120T224013_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20191120T232742_20191120T233149_C001	Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
L2 Quality Flags (1 Hz & 1Hz PLRM)		
Currently, there are several common flags raised in the Level 2 products, which are summarised below.		
> 1Hz and 1Hz Ocean SSHA Quality Flags: These flags are currently set for products over sea ice, which is to be expected.		
<b>, ,</b>	i producia over aca ice, which is to be expected.	
Number of products with errors: 168		
Number of products with errors:       168         5.7 L2 Ocean Retracking Quality Check		
	n products over sea ree, writer is to be expected.	
5.7 L2 Ocean Retracking Quality Check		
5.7 L2 Ocean Retracking Quality Check L2 Retracking Flags (20Hz)	asurement record. The bit value of this flag indica	ates any problems when set.
5.7 L2 Ocean Retracking Quality Check L2 Retracking Flags (20Hz) CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz mea	asurement record. The bit value of this flag indica	ates any problems when set.
<ul> <li>5.7 L2 Ocean Retracking Quality Check</li> <li>L2 Retracking Flags (20Hz)</li> <li>CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz mea</li> <li>Ocean Retracking Quality Flag: This flag is currently set for products falling</li> </ul>	asurement record. The bit value of this flag indica	ates any problems when set.
5.7 L2 Ocean Retracking Quality Check         L2 Retracking Flags (20Hz)         CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz mea         Ocean Retracking Quality Flag: This flag is currently set for products falling         Number of products with errors:       51	asurement record. The bit value of this flag indica at ocean/ land boundaries, but this is expected.	ates any problems when set.
5.7 L2 Ocean Retracking Quality Check         L2 Retracking Flags (20Hz)         CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz mea         Ocean Retracking Quality Flag: This flag is currently set for products falling         Number of products with errors:       51         L2 Retracking Flags (20Hz, PLRM)	asurement record. The bit value of this flag indica at ocean/ land boundaries, but this is expected. RM measurement record. The bit value of this flag	ates any problems when set. g indicates any problems when set.