

# **QA4EO Daily Report for NOP data:**

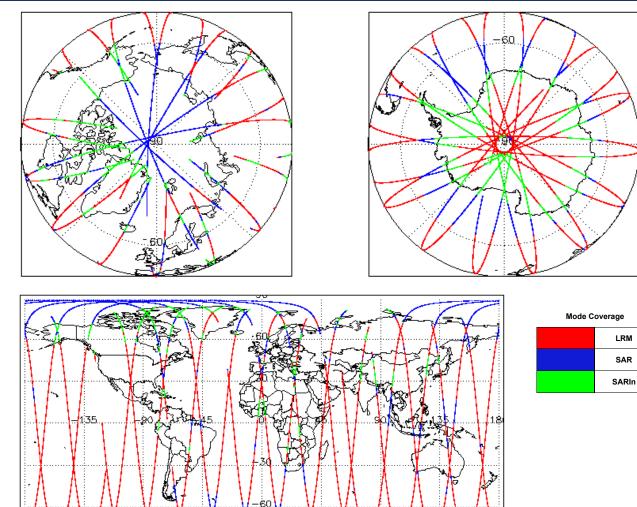
<u>21/12/2020</u>

Report Production:	05 Jan 2021	Check	L1 & L2
report Production:	05-Jan-2021	Server check: science-pds.cryosat.esa.int	Nominal
Drococcer Llood	CruceSet Ocean Brassager	Server check: calval-pds.cryosat.esa.int	Nominal
Processor Used:	CryoSat Ocean Processor	Product Software Check	Nominal
Data Used:	Near Real Time Ocean Products (NOP) L1B & L2 Science Data	Product Format Check	Nominal
Data Useu.		Product Header Analysis	Nominal
		Auxiliary Data File Usage Check	Nominal
		Auxiliary Correction Error Check	See Section 5.4
		Measurement Confidence Data Check	See Section 4.5, 4.6
		Measurement Quality Flag Check	See Section 5.6
		Ocean Retracking Quality Check	See Section 5.7
		QCC Error/ Warning Check	See Section 7.1 and 7.2

1. Overview

Mission / Instru	iment News
20-Dec-2020	None
21-Dec-2020	None
22-Dec-2020	Nothing planned





# 3. Instrument Configuration

The SIRAL instrument configuration for the day of acquisition is provided below.		
SIRAL instrument(s) in use:	SIRAL - A	

Star Tracker(s) in use:	
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## 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).

0

Star Tracker 1

For all products, a series of pre-defined checks are performed on the MPH an	d SPH in order to identify any inco	onsistencies and/or errors raised by the ground-segment processing chain.
L1B Processing Quality HR: The 11b_proc_flag_hr flag is currently set all L1 OSARIn chains. A modification is required in the next release.	B IOPR and IOPN products becau	use the I1b_processing_quality_hr field is not correctly configured in the OSAR and
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 pr	e-determined baseline and also to	o check the validity of Auxiliary Data Files is correct.
Dynamic Atmospheric Correction: The DAC is missing in all products beca	use 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 reco	rd. The bit value of this flag indicat	tes any problems when set.
Number of products with errors: 0		
4.5 L1B Measurement Confidence Data Check		
	The bit set of the set	n
CryoSat L1B data includes a measurement confidence flag for each measure Attitude Correction Missing: This flag is currently set in error for NOPR pr		
Number of products with errors: 0	oducis due to a comiguration issu	e. This is being investigated and will be updated in the next Sw update.
4.6 L1B Waveform Group Data Check		
CryoSat L1B data includes a waveform data flag for each measurement recor	d. The hit value of this flag indicat	
	<ol> <li>The bit value of this hay indicate</li> </ol>	es any problems when set.
Loss of Echo Flag: This flag is currently set for products over land, but this	-	es any problems when set.
	-	es any problems when set.
Number of products with errors: 19	-	es any problems when set. Description
Number of products with errors: 19 Product	is to be expected.	
Number of products with errors:         19           Product         0           CS_OFFL_SIR_NOPM1B_20201221T075728_20201221T080634_C001         0	is to be expected.	Description
Number of products with errors:         19           Product         19           CS_OFFL_SIR_NOPM1B_20201221T075728_20201221T080634_C001         1000000000000000000000000000000000000	s is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records
Number of products with errors:         19           Product	tis 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
Number of products with errors:         19           Product	s 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
Number of products with errors:         19           Product         CS_OFFL_SIR_NOPM1B_20201221T075728_20201221T080634_C001           CS_OFFL_SIR_NOPM1B_20201221T170041_20201221T170804_C001         CS_OFFL_SIR_NOPM1B_20201221T073727_20201221T074025_C001           CS_OFFL_SIR_NOPN1B_20201221T091454_20201221T0791910_C001         CS_OFFL_SIR_NOPN1B_20201221T122838_20201221T122913_C001	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
Number of products with errors:         19           Product         19           CS_OFFL_SIR_NOPM1B_20201221T075728_20201221T080634_C001         0           CS_OFFL_SIR_NOPM1B_20201221T170041_20201221T170804_C001         0           CS_OFFL_SIR_NOPM1B_20201221T073727_20201221T074025_C001         0           CS_OFFL_SIR_NOPN1B_20201221T091454_20201221T091910_C001         0           CS_OFFL_SIR_NOPN1B_20201221T122838_20201221T122913_C001         0           CS_OFFL_SIR_NOPN1B_20201221T124207_20201221T124221_C001         0	Test Failed  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
Number of products with errors:         19           Product	s 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
Number of products with errors:         19           Product         19           CS_OFFL_SIR_NOPM1B_20201221T075728_20201221T080634_C001         0           CS_OFFL_SIR_NOPM1B_20201221T07041_20201221T074025_C001         0           CS_OFFL_SIR_NOPN1B_20201221T073727_20201221T074025_C001         0           CS_OFFL_SIR_NOPN1B_20201221T091454_20201221T091910_C001         0           CS_OFFL_SIR_NOPN1B_20201221T122838_20201221T122913_C001         0           CS_OFFL_SIR_NOPN1B_20201221T124207_20201221T124221_C001         0           CS_OFFL_SIR_NOPN1B_20201221T141017_20201221T141150_C001         0           CS_OFFL_SIR_NOPN1B_20201221T143226_20201221T1443431_C001         0	s 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
Number of products with errors:         19           Product         19           CS_OFFL_SIR_NOPM1B_20201221T075728_20201221T080634_C001         0           CS_OFFL_SIR_NOPM1B_20201221T170041_20201221T170804_C001         0           CS_OFFL_SIR_NOPM1B_20201221T073727_20201221T074025_C001         0           CS_OFFL_SIR_NOPN1B_20201221T091454_20201221T091910_C001         0           CS_OFFL_SIR_NOPN1B_20201221T122838_20201221T122913_C001         0           CS_OFFL_SIR_NOPN1B_20201221T124207_20201221T124221_C001         0           CS_OFFL_SIR_NOPN1B_20201221T141017_20201221T14451_C001         0           CS_OFFL_SIR_NOPN1B_20201221T143226_20201221T143431_C001         0           CS_OFFL_SIR_NOPN1B_20201221T160058_20201221T160130_C001         0	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
Number of products with errors:         19           Product	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
Number of products with errors:         19           Product	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           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
Number of products with errors:         19           Product	is to be expected.	Description           The tracking echo is missing for one or more records
> Loss of Echo Flag: This flag is currently set for products over land, but this           Number of products with errors:         19           Product         19           CS_OFFL_SIR_NOPM1B_20201221T075728_20201221T080634_C001         CS_OFFL_SIR_NOPM1B_20201221T170041_20201221T170804_C001           CS_OFFL_SIR_NOPM1B_20201221T073727_20201221T074025_C001         CS_OFFL_SIR_NOPN1B_20201221T091454_20201221T091910_C001           CS_OFFL_SIR_NOPN1B_20201221T122838_20201221T122913_C001         CS_OFFL_SIR_NOPN1B_20201221T124207_20201221T124221_C001           CS_OFFL_SIR_NOPN1B_20201221T141017_20201221T14150_C001         CS_OFFL_SIR_NOPN1B_20201221T143226_20201221T143431_C001           CS_OFFL_SIR_NOPN1B_20201221T143226_20201221T160130_C001         CS_OFFL_SIR_NOPN1B_20201221T191816_20201221T19938_C001           CS_OFFL_SIR_NOPN1B_20201221T195840_20201221T200431_C001         CS_OFFL_SIR_NOPN1B_20201221T195840_20201221T224148_C001           CS_OFFL_SIR_NOPN1B_20201221T041035_20201221T041155_C001         CS_OFFL_SIR_NOPN1B_20201221T041035_20201221T044145_C001	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           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

# 5. NOP Level 2 Data Quality Check

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

Loss of Echo

#### 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).

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:

## 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.

Wind Model File Usage: This file is currently not included in all L2 products.

CS OFFL SIR NOPR1B 20201221T042152 20201221T043145 C001

CS\_OFFL\_SIR\_NOPR1B\_20201221T065627\_20201221T070120\_C001

CS\_OFFL\_SIR\_NOPR1B\_20201221T091141\_20201221T091358\_C001

CS\_OFFL\_SIR\_NOPR1B\_20201221T115449\_20201221T115706\_C001

CS\_OFFL\_SIR\_NOPR1B\_20201221T145217\_20201221T145416\_C001

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).

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.

33

- > 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:

Bit Strat. Sec. Norms 2: Additional 2002/2017/03/2012/01/2010         Mater Sec. Sec. Sec. Sec. Sec. Sec. Sec. Sec.	Product	Test Failed	Description
Carl, Dirit, J. 2007. USE Control Triangend, Dirit Control Triangend, Dir		Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Bayes         Description         Too company register balance         Too company register balance         Too company register balance           30 OFFL SR NOW 2. 200721103028. 2007211103040. COII         Mater Dynamic Too company         Teo company register balance         Teo company register balance           30 OFFL SR NOW 2. 200721103040. COII         Mater Dynamic Too company         Teo company register balance         Teo company register balance           30 OFFL SR NOW 2. 200721103040. COII         Mater Dynamic Too company         Teo company register balance         Teo company register balance           30 OFFL SR NOW 2. 200721103040. COII         Mater Dynamic Too company         Teo company register balance         Teo company register balance           30 OFFL SR NOW 2. 200721103040. COII         Mater Dynamic Too company         Teo company register balance         Teo company register balance           30 OFFL SR NOW 2. 2007211103040. COII         Mater Dynamic Too company         Teo company register balance         Teo company register balance           30 OFFL SR NOW 2. 20072111103040. COIII         Mater Dynamic Too company         Teo company register balance         Teo company register balance           30 OFFL SR NOW 2. 200721111111111111111111111111111111111	CS_OFFL_SIR_NOPN_2_20201221T025141_20201221T025333_C001	Mean Dynamic Topography (1)	
Corr Link, Nom 2, 20001211100002, 2001211100012, 2001211100121, 200121110012, 2001211100012, 2001211100012, 200121110012, 2001211100012, 200121	CS_OFFL_SIR_NOPN_2_20201221T032959_20201221T033317_C001		
Basel Montel Control Instance Control Instance Social Strategy (1)         Troopage (1)         Troopage (1)         Troopage (1)           Control Ser, NOPN 2. 22212211101182. 2001         Mean Sec Social Strategy (1)         The sec and rev with the Main Dynamic Troopage by legds for our sectors.           Control Ser, NOPN 2. 22212211101182. 2001211101182. 2001         Mean Sec Social (1) Mean Dynamic Troopage by legds for our sectors.         The sectors and the Main Dynamic Troopage by legds for our sectors.           Control Ser, NOPN 2. 22012211101182. 20012211101182. 2001         Mean Sec Social (1) Mean Dynamic Troopage by legd for our sectors.         The sectors and the Main Dynamic Troopage by legds for our sectors.           Control Ser, NOPN 2. 22012211101182. 20012211101182. 2001211101182. 20011         Mean Sec Social Sectors (1) Mean Dynamic Troopage by legd for our sectors.         The sectors and the Main Dynamic Troopage by legd for our sectors.           Control Ser, NOPN 2. 22012211101182. 20012211101182. 20011         Mean Sec Social (1) Mean Dynamic Troopage by legd for our sectors.         The sectors and the Main Dynamic Troopage by legd for our sectors.           Control Ser, NOPN 2. 22012211101828. 20012211101828. 2001211101828. 200122111	CS_OFFL_SIR_NOPN_2_20201221T033829_20201221T033954_C001	Mean Dynamic Topography (1)	
Carger Carger,	CS_OFFL_SIR_NOPN_2_20201221T042046_20201221T042152_C001		
CS, DFL, SR, NOPH, 2, 200012211003809, 200012211003819, 200012211003809, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 200012211003849, 2000122111	CS_OFFL_SIR_NOPN_2_20201221T051735_20201221T051842_C001	Mean Dynamic Topography (1)	
CSUPT_DBR_VMPL_2.0001211109362_0001         Trapagraphy (1)         Trapagraphy (1)         Trapagraphy (1)           CSUPT_SIR_VMPL_2.00012211063508_0001221105518_0001         Mean Sections (1), Mean Dynamic         Trapagraphy (1)         Trave records           CSUPT_SIR_VMPL_2.00012211063508_0001221106516_0001         Mean Dynamic Topography (1)         There is an error with the MSS height (1) for one runne records           CSUPT_SIR_VMPL_2.0001221106356_0001221110556_0001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height (1)           CSUPT_SIR_VMPL_2.0001221110556_0001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height (1)           CS_UPT_SIR_VMPL_2.0001221110556_0001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height (1)           CS_UPT_SIR_VMPL_2.0001221110556_0001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height (1)           CS_UPT_SIR_VMPL_2.0001221110556_0001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height (1)           CS_UPT_SIR_VMPL_2.0001221110556_0001221110546_0001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height (1)           CS_UPT_SIR_VMPL_2.0001221110556_0001221110546_0001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height (1)           CS_UPT_SIR_VMPL_2.00	CS_OFFL_SIR_NOPN_2_20201221T055957_20201221T060110_C001		
Call Strate Subfrouch 2, 200012111083818_200012111083818_20001         Toography (1)         Toography (2)         Toography (2)           CS, OFFL, SIR, NOPK 2, 20012211100345, 2001         Mean Dynamic Toography (1)         There is an error with the Mean Dynamic Toography height for one or none records.           CS, OFFL, SIR, NOPK 2, 200012211100345, 20012211100345, 2001         Mean Dynamic Toography (1)         There is an error with the Mean Dynamic Toography height for one or none records.           CS, OFFL, SIR, NOPK 2, 2001221110332, 2001221110346, 2001         Mean Dynamic Toography (1)         There is an error with the Mean Dynamic Toography height for one or none records.           CS, OFFL, SIR, NOPK 2, 2001221110342, 2001221110346, 2001         Mean Dynamic Toography (1)         There is an error with the Mean Dynamic Toography height for one or none records.           CS, OFFL, SIR, NOPK 2, 2001221110342, 2001221110346, 2001         Mean Dynamic Toography (1)         There is an error with the Mean Dynamic Toography height for one or none records.           CS, OFFL, SIR, NOPK 2, 2001221110345, 2001221110345, 2001         Mean Dynamic Toography (1)         There is an error with the MSD Noght (clobin) 1) and the Mean Dynamic Toography (1)         There is an error with the MSD Noght	CS_OFFL_SIR_NOPN_2_20201221T073727_20201221T074025_C001		
CS, DFL, SH, NORE 2, 2001221110354, 202012211100317, 2001         Topography (i)         Topography (ii)         Topography (iii)         Topography (iii)           CS, DFL, SH, NORE 2, 2001221110034, 20201221110034, 202012211101354, 202012211101354, 202012211101354, 202012211100373, 20201         Mean Dynamic Topography (i)         There is an error with the Mean Dynamic Topography height for one or more records.           CS, DFL, SH, NORE 2, 202012211100354, 202012211100373, 20201         Mean Dynamic Topography (i)         There is an error with the Mean Dynamic Topography height for one or more records.           CS, DFL, SH, NORE 2, 202012211100374, 202012211100373, 20201         Mean Dynamic Topography (i)         There is an error with the Mean Dynamic Topography height for one or more records.           CS, DFL, SH, NORE 2, 202012211100374, 202012211100370, 2001         Mean Dynamic Topography (i)         There is an error with the Mean Dynamic Topography height for one or more records.           CS, DFL, SH, NORE 2, 202012211103704, 202012211103	CS_OFFL_SIR_NOPN_2_20201221T083309_20201221T083918_C001		
Call, DFL, Sin, NOPN, 2, 202012211101541, 202012211101551, 20201         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height for one or more records           CS, OFFL, SIR, NOPN, 2, 20201221110573, 20201221110573, 20201         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height for one or more records           CS, OFFL, SIR, NOPN, 2, 20201221110573, 20201221110158, 2001221110158, 200112, 20110221110573, 20201221110158, 200112, 2011021110573, 20201221110158, 200112, 2011021110573, 20201221110573, 20201221110573, 20201221110573, 20201221110573, 20201221110573, 20201221110573, 20201221110573, 20201221110573, 20201221110573, 20201221110573, 20201221110573, 20201221110573, 20201221110573, 20201221110573, 20201221120571, 20201221110573, 20201221120571, 20201221120577, 20201221120577, 20201221120577, 20201221120577, 20201221120577, 20201221120577, 20201221120577, 202012211210577, 202012211210577, 202012211210577, 2020122112125757, 2020122112125757, 2020122112125757, 2020122112125757, 2020122112215757, 2020122112125757, 2020122112125757, 2020122112125757, 2020122112125757, 20201221121257	CS_OFFL_SIR_NOPN_2_20201221T091454_20201221T091910_C001		
Case, Der L., Sier, NOPN 2, 20201221110542, 0001221110573, C001         Mean Dynamic Topography (1)         more records           CS, OFFL, SIR, NOPN 2, 20201221110532, 20201221110573, C001         Mean Dynamic Topography (1)         There is an error with the Man Dynamic Topography height for one or more records           CS, OFFL, SIR, NOPN 2, 20201221110573, C001         Mean Dynamic Topography (1)         There is an error with the Man Dynamic Topography height for one or more records           CS, OFFL, SIR, NOPN 2, 202012211105244, 202012211105244, 202012211105244, 202012211105244, 202012211105244, 202012211105243, 202012211105233, C001         Mean Sas Surface (1), Mean Dynamic Topography (1)           CS, OFFL, SIR, NOPN 2, 202012211105244, 202012211105203, C001         Mean Sas Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height foolding 1) and the Mean Dynamic Topography (1)           CS, OFFL, SIR, NOPN 2, 202012211105230, 202012211105203, C001         Mean Sas Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height foolding 1) and the Mean Dynamic Topography (1)           CS, OFFL, SIR, NOPN 2, 20201221110530, 20201221110530, C001         Mean Sas Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height foolding 1) and the Mean Dynamic Topography (1)           CS, OFFL, SIR, NOPN 2, 20201221110540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 20201221120540, 2020122	CS_OFFL_SIR_NOPN_2_20201221T100348_20201221T100617_C001	Mean Dynamic Topography (1)	
Call Confl. 2, Bit Work 2, 2001221110332, 2001221110332, 2001         Intermediation         Intermediation           CS_OFFL_SIR_NOPN_2, 200012211110332, 2001221110449, 2001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height for one or more records           CS_OFFL_SIR_NOPN_2, 20001221110244, 200012211106240, 2001         Mean Ses Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (coldinot 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPN_2, 20001221110244, 200012211102544, 2001         Mean Ses Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (coldinot 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPN_2, 200012211102544, 20012211102544, 2001         Mean Ses Surface (1), Mean Dynamic Topography ingit (coldinot 1) for one or more records           CS_OFFL_SIR_NOPN_2, 200012211102544, 20012211102544, 2001         Mean Ses Surface (1), Mean Dynamic Topography ingit (coldinot 1) and the Mean Dynamic Topography (1)         There is an error with the MSS height (coldinot 1) and the Mean Dynamic Topography ingit (coldinot 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPN_2, 20001221110540, 2001221100641, Coldinot 1)         Mean Ses Surface (1), Mean Dynamic Topography ingit (coldinot 1) and the Mean Dynamic Topo	CS_OFFL_SIR_NOPN_2_20201221T101243_20201221T101554_C001	Mean Dynamic Topography (1)	
CS_DFFL_SIR_NOPN_2_20201221T160244_20201221T16448_0001 Mean Dynamic Topography (1) more records There is an error with the MSS height (colution 1) and the Mean Dynamic Topography (1) more records CS_OFFL_SIR_NOPN_2_20201221T16428_20201221T164448_0001 Mean Ses Surface (1). Mean Dynamic Topography height for one or more records CS_OFFL_SIR_NOPN_2_20201221T16428_1_20201221T16448_0001 Mean Ses Surface (1). Mean Dynamic Topography height for one or more records CS_OFFL_SIR_NOPN_2_20201221T16483_20201221T16483_0001221T16520_0001 Mean Ses Surface (1). Mean Dynamic Topography height folders 1) for one or more records CS_OFFL_SIR_NOPN_2_20201221T16483_0001221T16520_0001 Mean Ses Surface (1). Mean Dynamic Topography height folders 1) and the Mean Dynamic Topography (1) There is an error with the MSS height (colution 1) and the Mean Dynamic Topography (1) There is an error with the MSS height (colution 1) and the Mean Dynamic Topography (1) There is an error with the MSS height (colution 1) and the Mean Dynamic Topography (1) There is an error with the MSS height (colution 1) and the Mean Dynamic Topography (1) There is an error with the MSS height (colution 1) and the Mean Dynamic Topography (1) There is an error with the MSS height (colution 1) and the Mean Dynamic Topography height (colution 1) and the Me	CS_OFFL_SIR_NOPN_2_20201221T105344_20201221T105733_C001	Mean Dynamic Topography (1)	
CS_OFFL_SIR_NOPN_2_00012211190040_00012211190040_0001 Mean Sea Surface (1) Mean Dynamic Topography (1) There is an error with the MSS height (doublor 1) and the Mean Dynamic Topography (1) Topography (1) Mean Dynamic Topograph	CS_OFFL_SIR_NOPN_2_20201221T115332_20201221T115449_C001	Mean Dynamic Topography (1)	
CS_UPTP_SIR_NOPM_2_2001221116423_000121116424_001         Topography (1)         Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPN_2_20201221116431_20201221116523_001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPN_2_20201221116231_002012211162544_001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPN_2_202012211191816_02012211191938_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPN_2_202012211191846_02012211200431_001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPN_2_20201221120576_02012211200431_001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPN_2_20201221120576_0201221120657_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPN_2_20201221121408_02012211214219_001         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_202012211212300_0001         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_202012211212300_0001         Mean Sea Surface (1), Mean Dynamic Topography height	CS_OFFL_SIR_NOPN_2_20201221T150244_20201221T150409_C001	Mean Dynamic Topography (1)	
CS_OFFL_SIR_NOPN_2_20201221110343_0201221110343_02012         Topography (1)         Topography (e)         Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPN_2_202012211103510_02012211103544_0001         Mean Sea Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPN_2_202012211103540_02012211200431_0001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the 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_202012211205746_020012211200431_0001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPN_2_202012211205746_020012211215057_0001         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_202012211215057_202012211215300_0001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPN_2_20201221122505_02012211215300_0001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPR_2_20201221102433_02012211024436_0001         Mean S	CS_OFFL_SIR_NOPN_2_20201221T164228_20201221T164448_C001		
CS_OFFL_SIR_NOPN_2_20201221118231_0200121119338_0001       Topography (n)       <	CS_OFFL_SIR_NOPN_2_20201221T164831_20201221T165203_C001		
CS_OFFL_SIR_NOPN_2_20201221T191816_02001221T191938_C001       Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)       Topography height (solution 1) and the Mean Dynamic Topography height (s	CS_OFFL_SIR_NOPN_2_20201221T182310_20201221T182544_C001	Topography (1)	Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201221T205746_20201221T205957_C001       Mean Sea Sufface (1), Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPN_2_20201221T215057_20201221T214036_20201221T214219_C001       Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_NOPN_2_20201221T215057_20201221T215000_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_20201221T223700_20201221T224148_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPN_2_20201221T223700_20201221T223115_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_20201221T010057_20201221T011019_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) or one or more records         CS_OFFL_SIR_NOPR_2_20201221T010057_20201221T011019_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) on the Mean Dynamic         CS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_NOPR_2_20201221T042152_20201221T043145_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_NOPR_2_20201221T042152_20201221T043145_C001       Mean	CS_OFFL_SIR_NOPN_2_20201221T191816_20201221T191938_C001	Topography (1), Total Geocentric Ocean	Topography height (solution 1) and the Total Geocentric Ocean Tide
CS_OFFL_SIR_NOPN_2_20201221121408/46_202012211214219_C001       Topography (1)       Topography (1)       Topography leight (solution 1) for one or more records         CS_OFFL_SIR_NOPN_2_202012211214036_202012211214219_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_202012211221500_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_202012211223300_202012211224148_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_NOPN_2_202012211223315_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_202012211232855_20201221101019_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_NOPR_2_202012211024133_20201221101019_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the 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_202012211024133_202012211024921_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_202012	CS_OFFL_SIR_NOPN_2_20201221T195840_20201221T200431_C001		
CS_OFFL_SIR_NOPN_2_202012211214036_202012211214216_0001         Investin Dynamic Topography (1)         more records           CS_OFFL_SIR_NOPN_2_20201221T215057_20201221T215300_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_20201221T232805_20201221T223115_C001         Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPN_2_20201221T00057_20201221T011019_C001         Mean Sea Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T040110_20201221T060834_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Me	CS_OFFL_SIR_NOPN_2_20201221T205746_20201221T205957_C001		
CS_OFFL_SIR_NOPN_2_20201221T21305/_20201221T224148_C001         Interian Dynamic Topography (1)         more records           CS_OFFL_SIR_NOPN_2_20201221T223700_20201221T224148_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPN_2_20201221T232855_20201221T233115_C001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T010057_20201221T011019_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T042152_20201221T043145_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T060834_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T074026_20201221T074739_C001         Mean Sea Surface (1), Mean Dynamic To	CS_OFFL_SIR_NOPN_2_20201221T214036_20201221T214219_C001	Mean Dynamic Topography (1)	
CS_OFFL_SIR_NOPN_2_202012211223700_202012211223115_C001       Topography (1)       Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPN_2_20201221T232855_20201221T233115_C001       Mean Dynamic Topography (1)       There is an error with the Masn Dynamic Topography height for one or more records         CS_OFFL_SIR_NOPR_2_20201221T010057_20201221T011019_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T042152_20201221T043145_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T042152_20201221T060834_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T074026_20201221T074739_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T080729_20201221T074739_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T080729_20201221T0960901_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T091910_20201221T092606_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records	CS_OFFL_SIR_NOPN_2_20201221T215057_20201221T215300_C001	Mean Dynamic Topography (1)	
CS_OFFL_SIR_NOPR_2_20201221123285_202012211233115_C001         Mean bynamic Topography (1)         more records           CS_OFFL_SIR_NOPR_2_20201221T010057_20201221T011019_C001         Mean Sea Surface (1), Mean Dynamic         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T042152_20201221T043145_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T060110_20201221T060834_C001         Mean Sea Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPR_2_20201221T074026_20201221T074739_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T074026_20201221T074739_C001         Mean Sea Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_NOPR_2_20201221T080729_20201221T080901_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records           CS_OFFL_SIR_NOPR_2_20201221T091910_20201221T092606_C001         Mean Sea Surface (1), Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)           CS_O	CS_OFFL_SIR_NOPN_2_20201221T223700_20201221T224148_C001		
CS_OFFL_SIR_NOPR_2_20201221T01005/_20201221T0101019_C001Topography (1)Topography (1)Topography height (solution 1) for one or more recordsCS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001Mean 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 recordsCS_OFFL_SIR_NOPR_2_20201221T042152_20201221T043145_C001Mean 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 recordsCS_OFFL_SIR_NOPR_2_20201221T060110_20201221T060834_C001Mean 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 recordsCS_OFFL_SIR_NOPR_2_20201221T060110_20201221T060834_C001Mean 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 recordsCS_OFFL_SIR_NOPR_2_20201221T074026_20201221T074739_C001Mean Sea Surface (1), Mean Dynamic Topography (1)There is an error with the Mean Dynamic Topography height for one or more recordsCS_OFFL_SIR_NOPR_2_20201221T080729_20201221T080901_C001Mean Dynamic Topography (1)There is an error with the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)CS_OFFL_SIR_NOPR_2_20201221T091910_20201221T092606_C001Mean Sea Surface (1), Mean Dynamic Topography (1)There is an error with the Mean Dynamic Topography (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more recordsCS_OFFL	CS_OFFL_SIR_NOPN_2_20201221T232855_20201221T233115_C001	Mean Dynamic Topography (1)	
CS_OFFL_SIR_NOPR_2_20201221T042152_20201221T043145_C001Topography (1)Topography height (solution 1) for one or more recordsCS_OFFL_SIR_NOPR_2_20201221T042152_20201221T043145_C001Mean 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 recordsCS_OFFL_SIR_NOPR_2_20201221T060110_20201221T060834_C001Mean 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 recordsCS_OFFL_SIR_NOPR_2_20201221T074026_20201221T074739_C001Mean 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 recordsCS_OFFL_SIR_NOPR_2_20201221T074026_20201221T074739_C001Mean 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 recordsCS_OFFL_SIR_NOPR_2_20201221T080729_20201221T080901_C001Mean Sea Surface (1), Mean Dynamic Topography (1)There is an error with the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)CS_OFFL_SIR_NOPR_2_20201221T091910_20201221T092606_C001Mean Sea Surface (1), Mean Dynamic Topography (1)There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (solution 1) for one or more recordsCS_OFFL_SIR_NOPR_2_20201221T210343_20201221T210500_C001Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non- Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium	CS_OFFL_SIR_NOPR_2_20201221T010057_20201221T011019_C001		
CS_OFFL_SIR_NOPR_2_20201221T042152_20201221T060834_C001       Topography (1)       Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T060110_20201221T060834_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_20201221T074026_20201221T074739_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_20201221T080729_20201221T080901_C001       Mean Dynamic Topography (1)       There is an error with the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_NOPR_2_20201221T091910_20201221T092606_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_NOPR_2_20201221T091910_20201221T092606_C001       Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non-       There is an error with the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium	CS_OFFL_SIR_NOPR_2_20201221T024133_20201221T024921_C001		
CS_OFFL_SIR_NOPR_2_202012211060110_202012211060834_C001       Topography (1)       Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T074026_20201221T074739_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T080729_20201221T080901_C001       Mean Dynamic Topography (1)       There is an error with the Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T091910_20201221T092606_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_20201221T091910_20201221T092606_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T210343_20201221T210500_C001       Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non-	CS_OFFL_SIR_NOPR_2_20201221T042152_20201221T043145_C001		
CS_OFFL_SIR_NOPR_2_20201221T074026_20201221T080901_C001       Topography (1)       Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T080729_20201221T080901_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_20201221T091910_20201221T092606_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T20343_20201221T210500_C001       Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non-	CS_OFFL_SIR_NOPR_2_20201221T060110_20201221T060834_C001		
CS_OFFL_SIR_NOPR_2_20201221T080729_20201221T080901_C001       Immedia Dynamic Topography (1)       more records         CS_OFFL_SIR_NOPR_2_20201221T091910_20201221T092606_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_NOPR_2_20201221T210343_20201221T210500_C001       Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non-	CS_OFFL_SIR_NOPR_2_20201221T074026_20201221T074739_C001		
CS_OFFL_SIR_NOPR_2_20201221T091910_20201221T092606_C001       Topography (1)       Topography height (solution 1) for one or more records         CS_OFFL_SIR_NOPR_2_20201221T210343_20201221T210500_C001       Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non-Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium	CS_OFFL_SIR_NOPR_2_20201221T080729_20201221T080901_C001	Mean Dynamic Topography (1)	
CS_OFFL_SIR_NOPR_2_20201221T210343_20201221T210500_C001 Geocentric Ocean Tide (FES), Non- Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium	CS_OFFL_SIR_NOPR_2_20201221T091910_20201221T092606_C001		
	CS_OFFL_SIR_NOPR_2_20201221T210343_20201221T210500_C001	Geocentric Ocean Tide (FES), Non-	Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium

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.

90

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20201220T234320_20201221T000757_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_20201221T001501_20201221T001924_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_20201221T002316_20201221T004425_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_20201221T005907_20201221T010057_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_20201221T011503_20201221T014706_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_20201221T015412_20201221T015950_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_20201221T020254_20201221T020733_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_20201221T023847_20201221T024038_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_20201221T025334_20201221T032652_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_20201221T033317_20201221T033829_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_20201221T034305_20201221T040013_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_20201221T040908_20201221T041035_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_20201221T043145_20201221T050535_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_20201221T051052_20201221T051317_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_20201221T051334_20201221T051735_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_20201221T052217_20201221T054816_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_20201221T061138_20201221T062255_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_20201221T062736_20201221T062909_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_20201221T062922_20201221T064013_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_20201221T064123_20201221T064456_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_20201221T064659_20201221T065217_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

	1	
CS_OFFL_SIR_NOPM_2_20201221T070322_20201221T071550_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_20201221T071805_20201221T073523_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_20201221T075728_20201221T080634_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_20201221T080935_20201221T082349_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_20201221T082625_20201221T083119_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_20201221T083122_20201221T083129_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_20201221T083136_20201221T083147_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_20201221T083153_20201221T083309_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_20201221T083918_20201221T084113_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_20201221T085926_20201221T090143_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_20201221T090306_20201221T090532_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_20201221T090613_20201221T090656_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_20201221T094645_20201221T100259_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_20201221T100617_20201221T101047_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_20201221T101720_20201221T104228_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_20201221T111702_20201221T114226_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_20201221T114442_20201221T114949_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_20201221T115706_20201221T121459_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_20201221T122707_20201221T122838_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_20201221T125428_20201221T132114_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_20201221T132428_20201221T132903_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_20201221T132906_20201221T133239_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_20201221T133724_20201221T141017_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_20201221T142309_20201221T142519_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_20201221T145416_20201221T145931_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_20201221T150410_20201221T150930_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
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CS_OFFL_SIR_NOPM_2_20201221T151603_20201221T153738_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_20201221T154024_20201221T155006_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_20201221T160136_20201221T160554_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_20201221T162147_20201221T162634_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_20201221T162822_20201221T163846_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_20201221T165518_20201221T170031_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_20201221T170041_20201221T170804_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_20201221T170841_20201221T172728_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_20201221T174457_20201221T181610_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_20201221T182544_20201221T182737_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_20201221T183430_20201221T184043_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_20201221T185040_20201221T185158_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_20201221T185638_20201221T190331_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_20201221T191938_20201221T192340_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_20201221T192506_20201221T193100_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_20201221T193155_20201221T194044_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_20201221T194703_20201221T195840_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_20201221T200725_20201221T201147_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_20201221T201401_20201221T202034_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_20201221T202143_20201221T202827_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_20201221T203007_20201221T204413_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_20201221T211145_20201221T211411_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_20201221T211534_20201221T212022_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_20201221T212320_20201221T213915_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_20201221T214219_20201221T215057_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_20201221T215323_20201221T221551_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.
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CS_OFFL_SIR_NOPM_2_20201221T224423_20201221T225353_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_20201221T225507_20201221T231801_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_20201221T232422_20201221T232855_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_20201221T233242_20201221T233704_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_20201221T233721_20201221T235720_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_20201221T064520_20201221T064658_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_20201221T101243_20201221T101554_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_20201221T133239_20201221T133354_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_20201221T145144_20201221T145147_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_20201221T211412_20201221T211534_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_20201221T212023_20201221T212201_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_20201221T223700_20201221T224148_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_NOPR_2_20201221T025141_20201221T025141_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_NOPR_2_20201221T091910_20201221T092606_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_NOPR_2_20201221T205146_20201221T205240_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_NOPR_2_20201221T205958_20201221T210114_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_NOPR_2_20201221T211014_20201221T211145_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.

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## 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.

73

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20201221T001330_20201221T001501_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_20201221T021648_20201221T021913_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_20201221T024921_20201221T025056_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_20201221T032959_20201221T033317_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_20201221T040013_20201221T040325_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_20201221T065440_20201221T065627_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_20201221T073727_20201221T074025_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_20201221T083309_20201221T083918_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_20201221T091454_20201221T091910_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_20201221T093544_20201221T093850_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_20201221T105344_20201221T105733_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_20201221T110726_20201221T110858_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_20201221T111321_20201221T111702_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_20201221T124207_20201221T124221_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_20201221T133239_20201221T133354_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_20201221T141017_20201221T141150_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_20201221T142555_20201221T142718_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_20201221T150244_20201221T150409_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_20201221T173324_20201221T173329_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_20201221T174129_20201221T174136_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_20201221T182310_20201221T182544_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_20201221T194557_20201221T194703_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_20201221T205240_20201221T205344_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_20201221T210114_20201221T210343_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_20201221T210539_20201221T210701_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_20201221T214036_20201221T214219_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_20201221T222143_20201221T222305_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_20201221T223700_20201221T224148_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_20201221T232012_20201221T232136_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_20201221T232855_20201221T233115_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_20201221T002213_20201221T002316_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_20201221T005750_20201221T005907_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_20201221T010057_20201221T011019_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_20201221T014706_20201221T015034_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_20201221T020105_20201221T020254_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_20201221T023417_20201221T023752_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_20201221T024133_20201221T024921_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_0FFL_SIR_NOPR_2_20201221T032652_20201221T032959_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_20201221T033954_20201221T034305_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_20201221T041810_20201221T042046_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_20201221T042152_20201221T043145_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_20201221T050535_20201221T050713_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_20201221T051842_20201221T052217_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_20201221T060110_20201221T060834_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_20201221T065627_20201221T070120_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_0FFL_SIR_NOPR_2_20201221T071553_20201221T071805_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_20201221T074026_20201221T074739_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_20201221T080729_20201221T080901_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_20201221T084113_20201221T084420_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_20201221T090931_20201221T091018_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_20201221T091141_20201221T091358_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_20201221T091408_20201221T091454_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_20201221T091910_20201221T092606_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_20201221T094002_20201221T094117_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_20201221T094443_20201221T094644_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_20201221T100259_20201221T100347_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_20201221T101555_20201221T101719_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_20201221T111215_20201221T111245_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
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CS_OFFL_SIR_NOPR_2_20201221T124512_20201221T124624_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_20201221T132115_20201221T132304_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_20201221T133355_20201221T133723_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_20201221T142718_20201221T142752_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_20201221T143432_20201221T143509_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_20201221T151238_20201221T151603_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_20201221T155006_20201221T155216_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_20201221T163912_20201221T164228_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_20201221T173148_20201221T173324_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_20201221T174006_20201221T174129_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_20201221T174136_20201221T174403_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_20201221T181611_20201221T182309_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_20201221T205146_20201221T205240_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_20201221T205958_20201221T210114_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_20201221T221551_20201221T221644_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG 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.

181

62

139

> 1Hz and 1Hz Ocean SSHA Quality Flags: These flags are currently set for products over sea ice, which is to be expected.

Number of products with errors:

#### 5.7 L2 Ocean Retracking Quality Check

## L2 Retracking Flags (20Hz)

CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Ocean Retracking Quality Flag: This flag is currently set for products falling at ocean/ land boundaries, but this is expected.

7

Number of products with errors:

#### L2 Retracking Flags (20Hz, PLRM)

CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz PLRM measurement record. The bit value of this flag indicates any problems when set.

Ocean Retracking Quality Flag (PLRM): This flag is currently set for products NOPR and NOPN products over sea ice, but this is to be expected.

## Number of products with errors:

## 7. NOP 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_NOPM1B	189	189	4	185	0
SIR_NOPR1B	129	129	1	128	0
SIR_NOPN1B	104	104	1	103	0
SIR_NOPM_2	189	189	132	57	0
SIR_NOPR_2	129	129	49	76	4
SIR_NOPN_2	104	104	39	65	0

## 7.1 QCC Errors

Total number of occurrences of each error											
Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_NOPR_2	4	4	4	4							

Test Description Key:	Fest Description Key:					
Abbreviation	Test name	Details				
RLOBOPNCDF	RangeLatitudeOrBlankOP_7NetCDF	Latitude should be between -90E7 and 90E7 - NetCDF				
RL	RangeLatitude_7	Latitude should be between -90E7 and 90E7				
RLOBOPNCDF	RangeLongitudeOrBlankOP_7NetCDF	Longitude should be between -180E7 and 180E7 - NetCDF				
RL	RangeLongitude_7	Longitude should be between -180E7 and 180E7				

# 7.2 QCC Warnings

			Total num	ber of occurrences of e	ach warning		
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMM
SIR_NOPM1B	185	0	0	0	0	0	0
SIR_NOPM_2	0	0	40	38	0	41	0
SIR_NOPN1B	103	0	0	0	0	0	0
SIR_NOPN_2	0	0	10	34	1	26	26
SIR_NOPR1B	126	0	0	0	0	0	0
SIR_NOPR_2	0	4	34	44	1	28	16
Product Type	RBSZOPOEPNCDF	RPEPOPFDLRMNCDF		DRPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	35	31	0	0	0	0	26
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	19	0	0	25	0	37	0
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	6	0	44	0	55	0	0
	r	÷	- i	n.	r	<b>1</b>	
Product Type	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	0	0	6	24	0	2	34
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	26	11	42	56	32	27
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	45	0	1	57	35	9	34
	r	÷	- i	n.	r	<b>1</b>	
Product Type	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-	-
SIR_NOPM1B	0	0	0	0	1		
SIR_NOPM_2	0	4	0	0	0		
SIR_NOPN1B	0	0	0	48	0		
SIR_NOPN_2	31	10	1	0	0		
SIR_NOPR1B	0	0	0	128	5		
SIR_NOPR_2	50	14	10	0	0	1	1

Test Description Key:						
Abbreviation	Test name	Details				
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter				
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)				
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees				
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees				
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only				
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RBSZOPOEPFDPLRM	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDPLRMSAR	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDPLRMSINN	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean				
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSSHAOFDPLRMNCD	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSWHOEPFDPLRMNC	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample				
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter				
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter				

7.3 Missing QCC Reports

Number of products with missing QCC reports:

0