

QA4EO Daily Report for NOP data:

<u>12/11/2020</u>

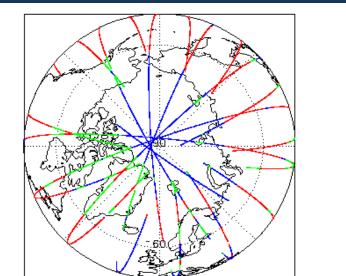
	13-Nov-2020	Check	L1 & L2
eport Production:	13-100-2020	Server check: science-pds.cryosat.esa.int	Nominal
Processor Used:	CriveSet Oscar Dresses	Server check: calval-pds.cryosat.esa.int	Nominal
Processor Used:	CryoSat Ocean Processor	Product Software Check	Nominal
Data Used:	Near Real Time Ocean Products (NOP)	Product Format Check	Nominal
	L1B & L2 Science Data	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 and 5.5
		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

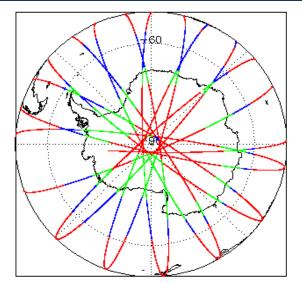
1. Overview

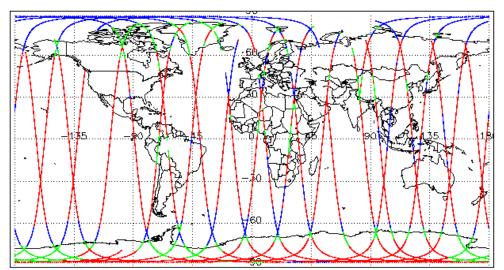
11-INOV-2020	None
12-Nov-2020	None
12 Nov 2020	Nathing along al

13-Nov-2020 Nothing planner

2. Global Coverage







Mode Coverage
LRM
SAR
SAR

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:	Star Tracker 1

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).

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.2 L1B Product Header Analysis		
r all products, a series of pre-defined checks are performed on the MPH an	d SPH in order to identify any incons	istencies and/or errors raised by the ground-segment processing chain.
B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1 SARIn chains. A modification is required in the next release.	B IOPR and IOPN products because	the I1b_processing_quality_hr field is not correctly configured in the OSAR an
umber of products with errors: 0		
3 L1B Auxilary Data File Usage Check		
ach product is checked for missing Data Set Descriptors with respect to a pr	e-determined baseline and also to ch	neck the validity of Auxiliary Data Files is correct.
ynamic Atmospheric Correction: The DAC is missing in all products becau	use the auxiliary files required are no	t available in time for processing. This known and expected behaviour.
umber of products with errors: 0		
.4 L1B Auxiliary Correction Error Check		
ryoSat L1B data includes a correction error flag for each measurement reco	rd. The bit value of this flag indicates	any problems when set.
umber of products with errors: 0		
5 L1B Measurement Confidence Data Check		
yoSat L1B data includes a measurement confidence flag for each measure	ment record. The bit value of this flac	r indicates any problems when set
Attitude Correction Missing: This flag is currently set in error for NOPR pr		
umber of products with errors: 1	outers due to a configuration issue.	This is being investigated and will be updated in the next ow update.
	Took Falled	Description
roduct S_OFFL_SIR_NOPM1B_20201112T074521_20201112T081120_C001	Test Failed Power scaling error	Description There is an error in the scaling of the L1B waveform for one or more
	· · · · · · · · · · · · · · · · · · ·	records
.6 L1B Waveform Group Data Check		
yoSat L1B data includes a waveform data flag for each measurement recor	d. The bit value of this flag indicates	any problems when set.
Loss of Echo Flag: This flag is currently set for products over land, but this	is to be expected.	
umber of products with errors: 22		
oduct	Test Failed	Description
S_OFFL_SIR_NOPM1B_20201112T010130_20201112T013449_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPM1B_20201112T102411_20201112T103704_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPM1B_20201112T103828_20201112T104036_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPM1B_20201112T142434_20201112T144725_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPM1B_20201112T201636_20201112T201849_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPM1B_20201112T223026_20201112T224643_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPN1B_20201112T005430_20201112T005914_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPN1B_20201112T072346_20201112T072600_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPN1B_20201112T072637_20201112T072803_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPN1B_20201112T090607_20201112T090710_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPN1B_20201112T104036_20201112T104346_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPN1B_20201112T104401_20201112T104612_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPN1B_20201112T145928_20201112T150046_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPN1B_20201112T222425_20201112T222532_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPN1B_20201112T231744_20201112T231932_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPR1B_20201112T022505_20201112T023505_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPR1B_20201112T035442_20201112T035629_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPR1B_20201112T095042_20201112T095128_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPR1B_20201112T100235_20201112T100506_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPR1B_20201112T180446_20201112T180901_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPR1B_20201112T194257_20201112T194956_C001	Loss of Echo	The tracking echo is missing for one or more records
S_OFFL_SIR_NOPR1B_20201112T212632_20201112T212812_C001	Loss of Echo	The tracking echo is missing for one or more records
5. N	OP Level 2 Data Qual	ity Check
1 L2 Product Format Check		
ach product, retrieved and unpacked from the science server, is checked to	ensure it consists of both on VML bo	ader file (HDR) and a binary product file (DRI)
וסיר איסטעטו, וטוווטיטע מוע עוואמטגפע ווטווו נווב גטופווטט צפועפו, וא טוופטגפע נט		
umber of products with errors: 0		
amber of products with errors: 0 2 L2 Product Header Analysis		

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.

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.

45

> 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.

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20201112T102411_20201112T103704_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_NOPM_2_20201112T214044_20201112T215329_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T005430_20201112T005914_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perioc Ocean Tide	Topography (solution 1) and the tidal corrections for one or more records
CS_OFFL_SIR_NOPN_2_20201112T014610_20201112T014845_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T031711_20201112T032101_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perioc Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic
CS_OFFL_SIR_NOPN_2_20201112T035845_20201112T035853_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_20201112T041810_20201112T041933_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T045654_20201112T050008_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T050522_20201112T050637_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_20201112T064427_20201112T064544_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T072346_20201112T072600_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perioc Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and the tidal corrections for one or more records
CS_OFFL_SIR_NOPN_2_20201112T072637_20201112T072803_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perioc Ocean Tide	Topography (solution 1) and the tidal corrections for one or more records
CS_OFFL_SIR_NOPN_2_20201112T082154_20201112T082341_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_20201112T090607_20201112T090710_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T100006_20201112T100235_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T104036_20201112T104346_C001	Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT and solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_NOPN_2_20201112T104401_20201112T104612_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T113913_20201112T114252_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T122044_20201112T122435_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T122943_20201112T123019_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T163625_20201112T163939_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T172737_20201112T172832_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_20201112T180901_20201112T181016_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_20201112T181521_20201112T181838_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perioc Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic
CS_OFFL_SIR_NOPN_2_20201112T194956_20201112T195234_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T195427_20201112T200013_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

CS_OFFL_SIR_NOPN_2_20201112T204513_20201112T204634_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T212812_20201112T213132_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T222425_20201112T222532_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20201112T230729_20201112T230929_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_20201112T022505_20201112T023505_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_20201112T035730_20201112T035845_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_20201112T040831_20201112T041619_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_20201112T054811_20201112T055748_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_20201112T072803_20201112T073526_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_20201112T090710_20201112T091235_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_20201112T100235_20201112T100506_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20201112T104612_20201112T105305_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_20201112T110647_20201112T111502_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_20201112T122435_20201112T122943_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_20201112T155219_20201112T155349_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_20201112T155725_20201112T155907_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_20201112T212632_20201112T212812_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20201112T221749_20201112T221942_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_20201112T221947_20201112T222123_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

5.5 L2 Measurement Confidence Data Check

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

Number of products with errors: 1		
Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20201112T074521_20201112T081120_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

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.

73

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

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20201111T235929_20201112T000818_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_20201112T001126_20201112T003432_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_20201112T005914_20201112T010008_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_20201112T010130_20201112T013449_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_20201112T014147_20201112T014610_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_20201112T015056_20201112T021454_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_20201112T032101_20201112T032650_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality for one or more records.	
	er Quality Flags have been set
CS_OFFL_SIR_NOPM_2_20201112T033016_20201112T033436_C001 CS_OFFL_SIR_NOPM_2_20201112T033016_2020112T033436_C001 CS_OFFL_SIR_NOPM_2_20201112T033016_2020112T033436_C001 CS_OFFL_SIR_NOPM_2_20201112T033016_2020112T033436_C001 CS_OFFL_SIR_NOPM_2_20201112T033016_2020112T033436_C001 CS_OFFL_SIR_NOPM_2_20201112T033016_20201112T033436_C001 CS_OFFL_SIR_NOPM_2_20201112T033016_20201112T033436_C001 CS_OFFL_SIR_NOPM_2_20201112T033016_2020112T033436_C001 CS_OFFL_SIR_NOPM_2_20201112T033016_2020112T033436_C001 CS_OFFL_SIR_NOPM_2_20201112T033016_20201 CS_OFFL_SIR_NOPM_2_2020112T033016_2020 CS_OFFL_SIR_NOPM_2_2020112T033016_2020 CS_OFFL_SIR_NOPM_2_2020112T033016_2020 CS_OFFL_SIR_NOPM_2_2020112T033016_2020 CS_OFFL_SIR_NOPM_2_2020112T033016_2020 CS_OFFL_SIR_NOPM_2_2020112T033016_202 CS_OFFL_SIR_NOPM_2_2020112T033016_202 CS_OFFL_SIR_NOPM_2_2020112T033016_202 CS_OFFL_SIR_NOPM_2_2020112T033016_202 CS_OFFL_SIR_NOPM_2_2020112T0300 CS_OFFL_SIR_NOPM_2_2020	
CS_OFFL_SIR_NOPM_2_20201112T033708_20201112T034409_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T040557_20201112T040656_C001	
CS_OFFL_SIR_NOPM_2_20201112T041933_20201112T045303_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T050008_20201112T050522_C001 OCOG Altimeter Range Quality, OCOG for one or more records.	er Quality Flags have been set
CS_OFFL_SIR_NOPM_2_20201112T051209_20201112T051854_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T052203_20201112T052627_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T054239_20201112T054450_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T054452_20201112T054636_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T055748_20201112T060814_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T061059_20201112T063212_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality set for one or more records.	, ,
CS_OFFL_SIR_NOPM_2_20201112T064016_20201112T064427_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Backscatter Quality for one or more records.	er Quality Flags have been set
CS_OFFL_SIR_NOPM_2_20201112T064928_20201112T070840_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T070932_20201112T071354_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T073644_20201112T074342_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T074521_20201112T081120_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T081343_20201112T081909_C001 OCOG Altimeter Range Quality, OCOG for one or more records.	er Quality Flags have been set
CS_OFFL_SIR_NOPM_2_20201112T081928_20201112T082154_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality for one or more records.	er Quality Flags have been set
CS_OFFL_SIR_NOPM_2_20201112T083014_20201112T084243_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T084330_20201112T090036_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T092406_20201112T093336_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T093539_20201112T095042_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201112T095310_20201112T095807_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality for one or more records.	er Quality Flags have been set
CS_OFFL_SIR_NOPM_2_20201112T095846_20201112T100006_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality for one or more records.	er Quality Flags have been set

CS_OFFL_SIR_NOPM_2_20201112T100706_20201112T101858_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_20201112T102411_20201112T103704_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_20201112T111502_20201112T112923_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_20201112T113238_20201112T113721_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_20201112T114451_20201112T121042_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_20201112T142434_20201112T144725_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_20201112T145055_20201112T145551_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_20201112T150443_20201112T153734_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_20201112T154944_20201112T155219_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_20201112T162241_20201112T162404_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_20201112T164337_20201112T171723_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_20201112T172911_20201112T173055_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_20201112T174835_20201112T180446_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_20201112T181016_20201112T181521_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_20201112T182211_20201112T185720_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_20201112T192010_20201112T194257_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_20201112T200200_20201112T201327_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_20201112T201636_20201112T201849_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_20201112T202330_20201112T203435_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_20201112T204634_20201112T204908_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_20201112T205029_20201112T210744_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_20201112T210943_20201112T212408_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_20201112T213132_20201112T213339_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_20201112T213432_20201112T213841_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_20201112T214044_20201112T215329_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_20201112T215756_20201112T220718_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_20201112T223026_20201112T224643_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_20201112T225210_20201112T230514_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_20201112T230929_20201112T231744_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_20201112T232048_20201112T233606_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Attimeter 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_20201112T233931_20201112T234355_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_20201112T235058_20201112T235102_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_20201112T040521_20201112T040557_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_20201112T040738_20201112T040831_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Attimeter 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_20201112T050522_20201112T050637_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_20201112T180901_20201112T181016_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_20201112T104346_20201112T104401_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Attimeter 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_20201112T105726_20201112T105814_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_20201112T110647_20201112T111502_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20201112T200013_20201112T200200_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_20201112T205025_20201112T205029_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.

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.

87

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20201112T000818_20201112T001016_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_20201112T003516_20201112T003757_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_20201112T003853_20201112T004021_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_20201112T004423_20201112T004546_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_20201112T005430_20201112T005914_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_20201112T014036_20201112T014147_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_20201112T034648_20201112T034712_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_20201112T035208_20201112T035313_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_20201112T040738_20201112T040831_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_20201112T041619_20201112T041727_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_20201112T052627_20201112T052723_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_20201112T072346_20201112T072600_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_20201112T072637_20201112T072803_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_20201112T082154_20201112T082341_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_20201112T090223_20201112T090439_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_20201112T090607_20201112T090710_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_20201112T091235_20201112T091327_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_20201112T100006_20201112T100235_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_20201112T101930_20201112T101959_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_20201112T102014_20201112T102102_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_20201112T103704_20201112T103828_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_20201112T104036_20201112T104346_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_20201112T104401_20201112T104612_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_20201112T113020_20201112T113238_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_20201112T113913_20201112T114252_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_20201112T121824_20201112T121948_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_20201112T122044_20201112T122435_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_20201112T122943_20201112T123019_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_20201112T124155_20201112T124434_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_20201112T141826_20201112T141932_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_20201112T144928_20201112T145035_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_20201112T160750_20201112T160929_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_20201112T160945_20201112T161309_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_20201112T173120_20201112T173237_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.

	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
CS_OFFL_SIR_NOPN_2_20201112T173613_20201112T173739_C001	Altimeter Range and Backscatter Quality PLRM Ocean Altimeter Range, SSHA, SWH	set for one or more records.
CS_OFFL_SIR_NOPN_2_20201112T174607_20201112T174835_C001	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_20201112T181521_20201112T181838_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_20201112T194956_20201112T195234_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_20201112T195427_20201112T200013_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_20201112T204908_20201112T204952_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_20201112T213841_20201112T214017_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_20201112T222425_20201112T222532_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_20201112T224644_20201112T225210_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_20201112T230729_20201112T230929_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_20201112T234434_20201112T234820_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_20201112T234902_20201112T234938_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_20201112T013449_20201112T013729_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_20201112T022505_20201112T023505_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_20201112T031251_20201112T031711_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_20201112T035853_20201112T035910_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_20201112T040415_20201112T040455_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_20201112T040831_20201112T041619_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_20201112T045303_20201112T045654_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_20201112T050637_20201112T051209_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_20201112T054811_20201112T055748_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_20201112T060814_20201112T061059_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_20201112T064544_20201112T064928_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_20201112T072803_20201112T073526_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_20201112T081120_20201112T081220_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_20201112T082341_20201112T083014_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_20201112T084243_20201112T084330_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T090710_20201112T091235_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality F PLRM The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality F et for one or more records. CS_OFFL_SIR_NOPR_2_20201112T106614_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality F et for one or more records. CS_OFFL_SIR_NOPR_2_20201112T110647_202011112T111502_C001 OCOG Altimeter Range Quality PLR	er Quality Flags Flags have been er Quality Flags Flags have been er Quality Flags Flags have been er Quality Flags Flags have been een set for one or een set for one or
CS_OFFL_SIR_NOPR_2_20201112T090710_20201112T091235_C001 and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality FLRM, Ocean Attimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality FLRM, OCOG Attimeter Range Quality FLRM, OCOG Backscatter Quality CRM, OCOG Attimeter Range Askscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T110647_20201112T1105814_C001 OCOG Attimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T110647_20201112T1141258_C001 OCOG Attimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T144726_20201112T144928_C001 OCOG Attimeter Range Quality PLRM, OCOG Backscatter Quality	Flags have been er Quality Flags Flags have been er Quality Flags Flags have been er Quality Flags Flags have been een set for one or
CS_OFFL_SIR_NOPR_2_20201112T093336_20201112T093539_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality F CS_OFFL_SIR_NOPR_2_20201112T100235_20201112T100506_C001 Cean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T105726_20201112T105814_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T110647_20201112T111502_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T141027_20201112T141258_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T144726_20201112T144928_C001 Ocean Altimeter Range SSHA, SWH and Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Ran	Flags have been er Quality Flags Flags have been er Quality Flags Flags have been een set for one or een set for one or
CS_OFFL_SIR_NOPR_2_20201112T100235_20201112T100506_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM In the OCGA Altimeter Range and Backscatter Quality est for one or more records. CS_OFFL_SIR_NOPR_2_20201112T104612_20201112T105305_C001 Cean Altimeter Range and Backscatter Quality PLRM, OCCG Altimeter Range and Backscatter Quality FLRM, CS_OFFL_SIR_NOPR_2_20201112T105726_20201112T105814_C001 OCCG Altimeter Range Quality PLRM, OCCG Backscatter Quality The OCCG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T110647_20201112T111502_C001 OCCG Altimeter Range Quality PLRM, OCCG Backscatter Quality The OCCG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T141027_20201112T141258_C001 OCCGG Altimeter Range Quality PLRM, OCCG Backscatter Quality The OCCG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T144726_20201112T144928_C001 OCCGG Altimeter Range Quality PLRM, OCCG Backscatter Quality The OCCG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T144726_20201112T144928_C001 OCCGG Altimeter Range ASHA, SWH a	Flags have been er Quality Flags Flags have been een set for one or een set for one or
CS_OFFL_SIR_NOPR_2_20201112T104612_20201112T105305_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range and Backscatter Quality CS_OFFL_SIR_NOPR_2_20201112T105726_20201112T105814_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T110647_20201112T111502_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T110647_20201112T111502_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T141027_20201112T141258_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T141027_20201112T144928_C001 OCOG Altimeter Range, SSHA, SWH and Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T144726_20201112T144928_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality The OCCOG Altimeter Range, SSHA, SWH and Backscatter and the OCOG Altimeter Range and Backscatter Quality PLRM	Flags have been een set for one or een set for one or
CS_OFFL_SIR_NOPR_2_20201112T105726_20201112T105814_C001 OCOG Backscatter Quality more records. CS_OFFL_SIR_NOPR_2_20201112T110647_20201112T111502_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T141027_20201112T141258_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T141027_20201112T141258_C001 OCCOG Altimeter Range, SSHA, SWH and Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T144726_20201112T144928_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality PLRM	een set for one or
CS_OFFL_SIR_NOPR_2_20201112T110047_20201112T111502_C001 OCOG Backscatter Quality more records. CS_OFFL_SIR_NOPR_2_20201112T141027_20201112T141258_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T144726_20201112T144928_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be more records. CS_OFFL_SIR_NOPR_2_20201112T144726_20201112T144928_C001 Ocean Altimeter Range and Backscatter Quality The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be more records.	
CS_OFFL_SIR_NOPR_2_20201112T1441027_20201112T1441236_C001 OCOG Backscatter Quality more records. OCoG Backscatter Quality CS_OFFL_SIR_NOPR_2_20201112T144726_20201112T144928_C001 OCOG Backscatter Quality DCean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM Ocean Altimeter Range SSHA SWH	en set for one or
CS_OFFL_SIR_NOPR_2_20201112T144726_20201112T144928_C001 Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM Ocean Altimeter Range SSHA. SWH	
Ocean Altimeter Range, SSHA_SWH	
CS_OFFL_SIR_NOPR_2_20201112T150108_20201112T150443_C001 CS_OFFL_SIR_NOPR_2_20201112T150148_C00 CS_OFFL_SIR_NOPR_2_20201 CS_OFFL_SIR_NOPR_2_2020 CS_OFF	
CS_OFFL_SIR_NOPR_2_20201112T153848_20201112T153925_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality COCOG Backscatter QUAL QUAL QUAL QUAL QUAL QUAL QUAL QUAL	en set for one or
CS_OFFL_SIR_NOPR_2_20201112T155219_20201112T155349_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records.	en set for one or
CS_OFFL_SIR_NOPR_2_20201112T155725_20201112T155907_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality COG Backscatter Quality More records.	en set for one or
CS_OFFL_SIR_NOPR_2_20201112T160033_20201112T160213_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 PLRM, OCOG Altimeter Range and Backscatter Quality FLRM	
CS_OFFL_SIR_NOPR_2_20201112T161950_20201112T162241_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 FLRM The Ocean Altimeter Range and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range and Backscatter Quality FLRM The Oce	
CS_OFFL_SIR_NOPR_2_20201112T162404_20201112T162934_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 FLRM The Ocean Altimeter Range and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM The Ocean Altimeter Range and Backscatter Quality FLRM The Oce	
CS_OFFL_SIR_NOPR_2_20201112T163939_20201112T164337_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 FLRM.	
CS_OFFL_SIR_NOPR_2_20201112T180446_20201112T180901_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality FLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM	
CS_OFFL_SIR_NOPR_2_20201112T194257_20201112T194956_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 FLRM.	
CS_OFFL_SIR_NOPR_2_20201112T200013_20201112T200200_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 set for one or more records.	
CS_OFFL_SIR_NOPR_2_20201112T210744_20201112T210935_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have be more records.	en set for one or
CS_OFFL_SIR_NOPR_2_20201112T212408_20201112T212512_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 PLRM.	
CS_OFFL_SIR_NOPR_2_20201112T215555_20201112T215756_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 PLRM.	
CS_OFFL_SIR_NOPR_2_20201112T221749_20201112T221942_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality COCOG Backscatter QUAL QUAL QUAL QUAL QUAL QUAL QUAL QUAL	en set for one or
CS_OFFL_SIR_NOPR_2_20201112T221947_20201112T222123_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 PLRM. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM. The Ocean Altimeter Range and Backscatter Quality PLRM.	
CS_OFFL_SIR_NOPR_2_20201112T230514_20201112T230729_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 FLRM.	

CS_OFFL_SIR_NOPR_2_20201112T233606_	_20201112T233931_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	L2 Quality Flags (1 Hz & 1Hz PLRM)								
Currently, there are several common flags r	aised in the Level 2 products, w	hich are summarised below.							
> 1Hz and 1Hz Ocean SSHA Quality Flags: 1	These flags are currently set for pro	oducts over sea ice, which is to be expected							
Number of products with errors:	167								
5.7 L2 Ocean Retracking Quality	y 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.									
	1 3 0	÷							
Ocean Retracking Quality Flag: This flag is c		ocean/ land boundaries, but this is expected.							
Ocean Retracking Quality Flag: This flag is c Number of products with errors:		ocean/ land boundaries, but this is expected.							
	eurrently set for products falling at o	ocean/ land boundaries, but this is expected							
Number of products with errors:	surrently set for products falling at 6	· · ·							
Number of products with errors: L2 Retracking Flags (20Hz, PLRM)	eurrently set for products falling at c 69 quality flag for each 20-Hz PLRM r	measurement record. The bit value of this fla	g indicates any problems when set.						

21

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	192	192	5	187	0
SIR_NOPR1B	96	96	0	96	0
SIR_NOPN1B	99	99	3	96	0
SIR_NOPM_2	192	192	136	49	7
SIR_NOPR_2	96	96	27	65	4
SIR_NOPN_2	99	99	35	61	3

7.1 QCC Errors

Number of QCC reports with errors:

	Total number of occurrences of each error										
Product Type	EOVSNCDF	MPHSVSNCDF	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-
SIR_NOPM_2	7	7	0	0	0	0					
SIR_NOPN_2	2	2	1	1	1	1					
SIR_NOPR_2	2	2	2	2	2	2					

Test Description Key:	est Description Key:					
Abbreviation	Test name	Details				
EOVSNCDF	EnumOrbitVectorSourceNetCDF	Orbit vector source should match one of the allowed enumeration values - NetCDF				
MPHSVSNCDF	MPH_State_Vector_Source_NetCDF	State_Vector_Source mismatch				
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

Number of QCC repo	orts with warnings	1536	Total num	ber of occurrences of e	ach warning		
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD
SIR_NOPM1B	187	0	0	0	0	0	0
SIR NOPM 2	0	0	37	36	1	37	0
SIR_NOPN1B	95	0	0	0	0	0	0
SIR_NOPN_2	0	1	9	30	8	22	24
SIR_NOPR1B	92	0	0	0	0	0	0
SIR_NOPR_2	0	2	36	39	0	35	25
		-		-			
Product Type	RBSZOPOEPNCDF	RDTCONCDF	RLPTONCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARN	CERPEPOPFDPLRMSINNCD
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	31	0	0	3	29	0	0
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	16	1	20	1	0	0	24
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	11	0	12	2	0	44	0
Product Type	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	0	0	24	0	0	4	27
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	29	0	0	25	15	38
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	53	0	0	42	0	1	55
Product Type	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF		SPHRTASCNSNCDF	SPHRTASCNSNCDF
SIR_NOPM1B	0	0	0	0	0	0	1
SIR_NOPM_2	0	9	34	0	3	0	1
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	50	28	25	28	16	1	0
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	30	8	34	44	1	0	0

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
RDTCONCDF	RangeDryTroposphericCorrectionOceanNetCDF	The Dry tropospheric correction should be between -2500mm and -1900mm (or missing) for surface type = ocean - NetCDF
RLPTONCDF	RangeLongPeriodTideOceanNetCDF	The long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) fo surface type = ocean
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSINN CDF	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
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Start_v2_NetCDF	Rel_Time_ASC_Node_Start mismatch (DBL ASC, rounded up to 0.1)
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch

7.3 Missing QCC Reports

Number of products with missing QCC reports:

0