

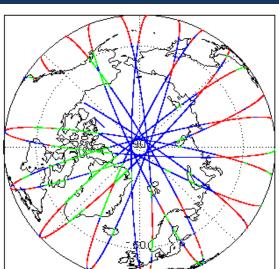
## **QA4EO Daily Report for IOP data:**

<u>09/01/2021</u>

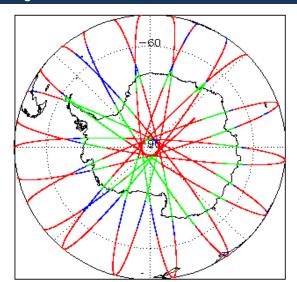
an art Draduation.	10 1 0001	Check	L1 & L2	P2P
Report Production:	12-Jan-2021	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	Carlo Cat Occore Decessor	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Usea:	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal
Dete Head	a Used: Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data	Product Format Check	Nominal	Nominal
Data Useu.		Product Header Analysis	Nominal	Nominal
		Auxiliary Data File Usage Check	Nominal	Nominal
		Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
		Measurement Confidence Data Check	See Section 4.5, 4.6	Nominal
		Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
		Ocean Retracking Quality Check	See Section 5.7	See Section 6.7
		QCC Error/ Warning Check	See Section 7.1 and 7.2	See Section 7.1, 7.2

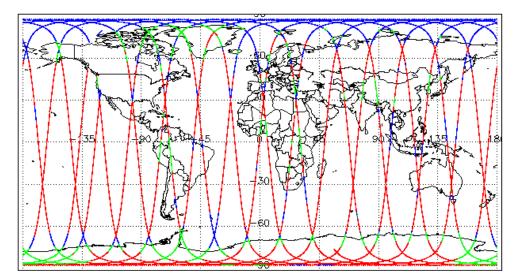
1. Overview

Mission / Instrument News		
08-Jan-2021	None	
09-Jan-2021	None	
10-Jan-2021	Nothing planned	













## 3. Instrument Configuration

SIRAL instrument(s) in use:

SIRAL - A

0

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

4. IOP 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).

	d SPH in order to identify any inco	nsistencies and/or errors raised by the ground-segment processing chain.		
<b>1B Processing Quality HR:</b> The I1b_proc_flag_hr flag is currently set all L1 SARIn chains. A modification is required in the next release.		ise the I1b_processing_quality_hr field is not correctly configured in the OSAR an		
Number 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	check the validity of Auxiliary Data Files is correct.		
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 indicat	es any problems when set.		
umber of products with errors: 0				
.5 L1B Measurement Confidence Data Check				
ryoSat L1B data includes a measurement confidence flag for each measure	ment record. The bit value of this f	ag indicates any problems when set.		
ttitude Correction Missing: This flag is currently set in error for IOPR prod				
umber of products with errors: 0				
.6 L1B Waveform Group Data Check				
ryoSat L1B data includes a waveform data flag for each measurement recor	d. The bit value of this flag indicate	es any problems when set.		
oss of Echo Flag: This flag is currently set for products over land, but this is	-	· · · · · · · · · · · · · · · · · · ·		
umber of products with errors: 25				
roduct	Test Failed	Description		
S_OFFL_SIR_IOPM1B_20210109T025511_20210109T030103_C001	Loss of Echo	The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPM1B_20210109T074936_20210109T075830_C001	Loss of Echo	The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPM1B_20210109T114844_20210109T121459_C001	Loss of Echo	The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPN1B_20210109T005213_20210109T005327_C001	Loss of Echo	The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPN1B_20210109T014346_20210109T014527_C001	Loss of Echo	The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPN1B_20210109T045211_20210109T045329_C001	Loss of Echo	The tracking echo is missing for one or more records		
	Loss of Echo	The tracking echo is missing for one or more records		
5_0FFL_SIR_IOPN1B_202101091054705_202101091054646_C001				
	Loss of Echo	The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPN1B_20210109T054703_20210109T054846_C001 S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063241_C001	Loss of Echo Loss of Echo	The tracking echo is missing for one or more records The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063241_C001				
	Loss of Echo	The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063241_C001 S_OFFL_SIR_IOPN1B_20210109T072528_20210109T073141_C001	Loss of Echo Loss of Echo	The tracking echo is missing for one or more records The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063241_C001 S_OFFL_SIR_IOPN1B_20210109T072528_20210109T073141_C001 S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001 S_OFFL_SIR_IOPN1B_20210109T132525_20210109T132609_C001	Loss of Echo Loss of Echo Loss of Echo	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		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063241_C001 S_OFFL_SIR_IOPN1B_20210109T072528_20210109T073141_C001 S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001	Loss of Echo Loss of Echo Loss of Echo Loss of Echo	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		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063241_C001 S_OFFL_SIR_IOPN1B_20210109T072528_20210109T073141_C001 S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001 S_OFFL_SIR_IOPN1B_20210109T132525_20210109T132609_C001 S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001 S_OFFL_SIR_IOPN1B_20210109T181037_20210109T181157_C001	Loss of Echo Loss of Echo Loss of Echo Loss of Echo Loss of Echo	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		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001           S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063241_C001           S_OFFL_SIR_IOPN1B_20210109T072528_20210109T073141_C001           S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001           S_OFFL_SIR_IOPN1B_20210109T132525_20210109T081133_C001           S_OFFL_SIR_IOPN1B_20210109T132525_20210109T132609_C001           S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001           S_OFFL_SIR_IOPN1B_20210109T181037_20210109T181157_C001           S_OFFL_SIR_IOPN1B_20210109T181505_20210109T181733_C001	Loss of Echo Loss of Echo Loss of Echo Loss of Echo Loss of Echo Loss of Echo	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		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T072528_20210109T073141_C001 S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001 S_OFFL_SIR_IOPN1B_20210109T132525_20210109T132609_C001 S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001 S_OFFL_SIR_IOPN1B_20210109T181037_20210109T181157_C001 S_OFFL_SIR_IOPN1B_20210109T181505_20210109T181733_C001 S_OFFL_SIR_IOPN1B_20210109T181505_20210109T181733_C001 S_OFFL_SIR_IOPN1B_20210109T212913_20210109T213404_C001	Loss of Echo Loss of Echo Loss of Echo Loss of Echo Loss of Echo Loss of Echo Loss of Echo	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		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T072528_20210109T073141_C001 S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001 S_OFFL_SIR_IOPN1B_20210109T132525_20210109T132609_C001 S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001 S_OFFL_SIR_IOPN1B_20210109T181037_20210109T181157_C001 S_OFFL_SIR_IOPN1B_20210109T181505_20210109T181733_C001 S_OFFL_SIR_IOPN1B_20210109T212913_20210109T213404_C001 S_OFFL_SIR_IOPN1B_20210109T222122_20210109T22235_C001	Loss of Echo Loss of Echo	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		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063054_C001 S_OFFL_SIR_IOPN1B_20210109T072528_20210109T073141_C001 S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001 S_OFFL_SIR_IOPN1B_20210109T132525_20210109T132609_C001 S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001 S_OFFL_SIR_IOPN1B_20210109T181037_20210109T181157_C001 S_OFFL_SIR_IOPN1B_20210109T181505_20210109T1811733_C001 S_OFFL_SIR_IOPN1B_20210109T181505_20210109T181733_C001 S_OFFL_SIR_IOPN1B_20210109T212913_20210109T213404_C001 S_OFFL_SIR_IOPN1B_20210109T222122_20210109T22335_C001 S_OFFL_SIR_IOPN1B_20210109T230157_20210109T230234_C001	Loss of Echo Loss of Echo	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		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001           S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063241_C001           S_OFFL_SIR_IOPN1B_20210109T072528_20210109T073141_C001           S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001           S_OFFL_SIR_IOPN1B_20210109T132525_20210109T132609_C001           S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001           S_OFFL_SIR_IOPN1B_20210109T181037_20210109T181157_C001           S_OFFL_SIR_IOPN1B_20210109T181505_20210109T181733_C001           S_OFFL_SIR_IOPN1B_20210109T212913_20210109T213404_C001           S_OFFL_SIR_IOPN1B_20210109T222122_20210109T2335_C001           S_OFFL_SIR_IOPN1B_20210109T230157_20210109T230234_C001           S_OFFL_SIR_IOPN1B_20210109T030103_20210109T030223_C001	<ul> <li>Loss of Echo</li> </ul>	The tracking echo is missing for one or more records The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001           S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063241_C001           S_OFFL_SIR_IOPN1B_20210109T072528_20210109T073141_C001           S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001           S_OFFL_SIR_IOPN1B_20210109T132525_20210109T132609_C001           S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001           S_OFFL_SIR_IOPN1B_20210109T181037_20210109T18157_C001           S_OFFL_SIR_IOPN1B_20210109T181505_20210109T213404_C001           S_OFFL_SIR_IOPN1B_20210109T222122_20210109T2335_C001           S_OFFL_SIR_IOPN1B_20210109T230157_20210109T230234_C001           S_OFFL_SIR_IOPN1B_20210109T030103_20210109T030223_C001           S_OFFL_SIR_IOPN1B_20210109T030103_20210109T031023_C001	<ul> <li>Loss of Echo</li> </ul>	The tracking echo is missing for one or more records The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001           S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063054_C001           S_OFFL_SIR_IOPN1B_20210109T072528_20210109T073141_C001           S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001           S_OFFL_SIR_IOPN1B_20210109T182525_20210109T081133_C001           S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001           S_OFFL_SIR_IOPN1B_20210109T181037_20210109T181157_C001           S_OFFL_SIR_IOPN1B_20210109T212913_20210109T181733_C001           S_OFFL_SIR_IOPN1B_20210109T212913_20210109T213404_C001           S_OFFL_SIR_IOPN1B_20210109T222122_20210109T2335_C001           S_OFFL_SIR_IOPN1B_20210109T30103_20210109T330234_C001           S_OFFL_SIR_IOPN1B_20210109T30103_20210109T30223_C001           S_OFFL_SIR_IOPN1B_20210109T30103_20210109T30223_C001           S_OFFL_SIR_IOPR1B_20210109T031026_20210109T031312_C001           S_OFFL_SIR_IOPR1B_20210109T031026_20210109T031312_C001	<ul> <li>Loss of Echo</li> </ul>	The tracking echo is missing for one or more records         The tracking e		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001           S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063054_C001           S_OFFL_SIR_IOPN1B_20210109T073528_20210109T073141_C001           S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001           S_OFFL_SIR_IOPN1B_20210109T182525_20210109T132609_C001           S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001           S_OFFL_SIR_IOPN1B_20210109T181037_20210109T181157_C001           S_OFFL_SIR_IOPN1B_20210109T181505_20210109T181733_C001           S_OFFL_SIR_IOPN1B_20210109T212913_20210109T213404_C001           S_OFFL_SIR_IOPN1B_20210109T222122_20210109T2335_C001           S_OFFL_SIR_IOPN1B_20210109T230157_20210109T230234_C001           S_OFFL_SIR_IOPN1B_20210109T030103_20210109T03023_C001           S_OFFL_SIR_IOPN1B_20210109T030103_20210109T031023_C001           S_OFFL_SIR_IOPN1B_20210109T030103_20210109T031412_C001           S_OFFL_SIR_IOPN1B_20210109T031400_20210109T03144_C001           S_OFFL_SIR_IOPR1B_20210109T031400_20210109T035544_C001	<ul> <li>Loss of Echo</li> </ul>	The tracking echo is missing for one or more records The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001         S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063054_C001         S_OFFL_SIR_IOPN1B_20210109T07528_20210109T073141_C001         S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001         S_OFFL_SIR_IOPN1B_20210109T132525_20210109T132609_C001         S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001         S_OFFL_SIR_IOPN1B_20210109T181037_20210109T181157_C001         S_OFFL_SIR_IOPN1B_20210109T181505_20210109T181733_C001         S_OFFL_SIR_IOPN1B_20210109T212913_20210109T213404_C001         S_OFFL_SIR_IOPN1B_20210109T222122_20210109T22335_C001         S_OFFL_SIR_IOPN1B_20210109T230157_20210109T230234_C001         S_OFFL_SIR_IOPN1B_20210109T030103_20210109T03023_C001         S_OFFL_SIR_IOPN1B_20210109T030103_20210109T03102_C001         S_OFFL_SIR_IOPR1B_20210109T031026_20210109T032414_C001         S_OFFL_SIR_IOPR1B_20210109T031400_20210109T032414_C001         S_OFFL_SIR_IOPR1B_20210109T031400_20210109T032414_C001         S_OFFL_SIR_IOPR1B_20210109T031400_20210109T032414_C001         S_OFFL_SIR_IOPR1B_20210109T031400_20210109T032414_C001         S_OFFL_SIR_IOPR1B_20210109T034447_20210109T032414_C001	<ul> <li>Loss of Echo</li> <li>Loss of Echo&lt;</li></ul>	The tracking echo is missing for one or more records The tracking echo is missing for		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001         S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063054_C001         S_OFFL_SIR_IOPN1B_20210109T07528_20210109T073141_C001         S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001         S_OFFL_SIR_IOPN1B_20210109T132525_20210109T132609_C001         S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001         S_OFFL_SIR_IOPN1B_20210109T181037_20210109T181157_C001         S_OFFL_SIR_IOPN1B_20210109T181505_20210109T181733_C001         S_OFFL_SIR_IOPN1B_20210109T212913_20210109T213404_C001         S_OFFL_SIR_IOPN1B_20210109T220122_20210109T2335_C001         S_OFFL_SIR_IOPN1B_20210109T230157_20210109T030234_C001         S_OFFL_SIR_IOPN1B_20210109T030103_20210109T03023_C001         S_OFFL_SIR_IOPN1B_20210109T030103_20210109T03123_C001         S_OFFL_SIR_IOPR1B_20210109T031400_20210109T031412_C001         S_OFFL_SIR_IOPR1B_20210109T031440_20210109T03544_C001	<ul> <li>Loss of Echo</li> </ul>	The tracking echo is missing for one or more records The tracking echo is missing for one or more records		
S_OFFL_SIR_IOPN1B_20210109T062659_20210109T063054_C001         S_OFFL_SIR_IOPN1B_20210109T063112_20210109T063054_C001         S_OFFL_SIR_IOPN1B_20210109T07528_20210109T073141_C001         S_OFFL_SIR_IOPN1B_20210109T080724_20210109T073141_C001         S_OFFL_SIR_IOPN1B_20210109T080724_20210109T081133_C001         S_OFFL_SIR_IOPN1B_20210109T132525_20210109T132609_C001         S_OFFL_SIR_IOPN1B_20210109T145311_20210109T145402_C001         S_OFFL_SIR_IOPN1B_20210109T181505_20210109T181733_C001         S_OFFL_SIR_IOPN1B_20210109T212913_20210109T213404_C001         S_OFFL_SIR_IOPN1B_20210109T22122_20210109T230234_C001         S_OFFL_SIR_IOPN1B_20210109T030103_20210109T030223_C001         S_OFFL_SIR_IOPR1B_20210109T031026_20210109T03112_C001         S_OFFL_SIR_IOPR1B_20210109T031400_20210109T032414_C001         S_OFFL_SIR_IOPR1B_20210109T031400_20210109T035544_C001         S_OFFL_SIR_IOPR1B_20210109T03126_20210109T03312_C001         S_OFFL_SIR_IOPR1B_20210109T031400_20210109T035544_C001         S_OFFL_SIR_IOPR1B_20210109T031400_20210109T035544_C001         S_OFFL_SIR_IOPR1B_20210109T0554847_20210109T05544_C001         S_OFFL_SIR_IOPR1B_20210109T05557_20210109T055544_C001         S_OFFL_SIR_IOPR1B_20210109T095537_20210109T095815_C001         S_OFFL_SIR_IOPR1B_20210109T195920_20210109T095815_C001	<ul> <li>Loss of Echo</li> <li>Loss of Echo&lt;</li></ul>	The tracking echo is missing for one or more records The tracking echo is missing for		

Number of products with errors:

#### 5.2 L2 Product Header Analysis

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

## 5.3 L2 Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct. Number of products with errors:
0

## 5.4 L2 Auxiliary Correction Error Check

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

0

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

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

> Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.

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

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

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

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20210109T173318_20210109T174247_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210109T004242_20210109T004628_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)
CS_OFFL_SIR_IOPN_2_20210109T022218_20210109T022533_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)
CS_OFFL_SIR_IOPN_2_20210109T023046_20210109T023208_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210109T031312_20210109T031400_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)
CS_OFFL_SIR_IOPN_2_20210109T040956_20210109T041102_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)
CS_OFFL_SIR_IOPN_2_20210109T045211_20210109T045329_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)
CS_OFFL_SIR_IOPN_2_20210109T062659_20210109T063055_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210109T063112_20210109T063241_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)
CS_OFFL_SIR_IOPN_2_20210109T072528_20210109T073141_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)
CS_OFFL_SIR_IOPN_2_20210109T080724_20210109T081133_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)
CS_OFFL_SIR_IOPN_2_20210109T090447_20210109T090807_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)
CS_OFFL_SIR_IOPN_2_20210109T094606_20210109T094955_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)
CS_OFFL_SIR_IOPN_2_20210109T122454_20210109T122613_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210109T132331_20210109T132351_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210109T135458_20210109T135624_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210109T140147_20210109T140457_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)
CS_OFFL_SIR_IOPN_2_20210109T145751_20210109T145924_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20210109T153439_20210109T153553_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210109T154047_20210109T154412_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)
CS_OFFL_SIR_IOPN_2_20210109T181037_20210109T181157_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20210109T185047_20210109T185652_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)
CS_OFFL_SIR_IOPN_2_20210109T203254_20210109T203443_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210109T204311_20210109T204500_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210109T212913_20210109T213404_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)
CS_OFFL_SIR_IOPN_2_20210109T235342_20210109T235555_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOPR_2_20210108T235311_20210109T000057_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)
CS_OFFL_SIR_IOPR_2_20210109T013327_20210109T014142_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)

CS_OFFL_SIR_IOPR_2_20210109T031400_20210109T032414_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)
CS_OFFL_SIR_IOPR_2_20210109T045329_20210109T050055_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)
CS_OFFL_SIR_IOPR_2_20210109T063242_20210109T063803_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)
CS_OFFL_SIR_IOPR_2_20210109T081133_20210109T081432_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)
CS_OFFL_SIR_IOPR_2_20210109T081432_20210109T081841_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)
CS_OFFL_SIR_IOPR_2_20210109T094956_20210109T095515_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)
CS_OFFL_SIR_IOPR_2_20210109T112649_20210109T113547_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)
CS_OFFL_SIR_IOPR_2_20210109T130617_20210109T131239_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)
CS_OFFL_SIR_IOPR_2_20210109T131239_20210109T131542_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)
CS_OFFL_SIR_IOPR_2_20210109T131732_20210109T131939_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20210109T132352_20210109T132507_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20210109T144151_20210109T145139_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)
CS_OFFL_SIR_IOPR_2_20210109T145139_20210109T145311_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)
CS_OFFL_SIR_IOPR_2_20210109T162408_20210109T163038_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)
CS_OFFL_SIR_IOPR_2_20210109T163038_20210109T163615_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)
CS_OFFL_SIR_IOPR_2_20210109T180321_20210109T180852_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)
CS_OFFL_SIR_IOPR_2_20210109T180852_20210109T181036_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)
CS_OFFL_SIR_IOPR_2_20210109T194306_20210109T194359_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_IOPR_2_20210109T194538_20210109T194710_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)
CS_OFFL_SIR_IOPR_2_20210109T194710_20210109T194959_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)
CS_OFFL_SIR_IOPR_2_20210109T195920_20210109T200035_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)
CS_OFFL_SIR_IOPR_2_20210109T212250_20210109T212913_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)
CS_OFFL_SIR_IOPR_2_20210109T213436_20210109T213706_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_IOPR_2_20210109T230425_20210109T230937_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)

1

1

#### 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:

## 5.6 L2 Measurement Quality Flag Check

#### L2 Quality Flags (20Hz)

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

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

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20210109T000749_20210109T004000_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS OFFE SIR TOPM 2 202101091004628 202101091005212 C001	<b>3</b>	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_IOPM_2_20210109T005337_20210109T005952_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_IOPM_2_20210109T014528_20210109T021949_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_IOPM_2_20210109T022534_20210109T023045_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_IOPM_2_20210109T023242_20210109T025209_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_IOPM_2_20210109T032414_20210109T035246_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_IOPM_2_20210109T035257_20210109T035807_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_IOPM_2_20210109T040335_20210109T040534_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_IOPM_2_20210109T040541_20210109T040955_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_IOPM_2_20210109T041315_20210109T043922_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_IOPM_2_20210109T044053_20210109T044750_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_IOPM_2_20210109T050230_20210109T050231_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_IOPM_2_20210109T050509_20210109T050636_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_IOPM_2_20210109T050729_20210109T051606_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_IOPM_2_20210109T051953_20210109T052214_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_IOPM_2_20210109T052216_20210109T052919_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_IOPM_2_20210109T053052_20210109T053739_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_IOPM_2_20210109T053913_20210109T054434_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_IOPM_2_20210109T055544_20210109T060605_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_IOPM_2_20210109T060948_20210109T061837_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_IOPM_2_20210109T062005_20210109T062658_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_IOPM_2_20210109T064354_20210109T064410_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_IOPM_2_20210109T064919_20210109T065912_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_IOPM_2_20210109T070947_20210109T071631_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_IOPM_2_20210109T071840_20210109T072334_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_IOPM_2_20210109T072410_20210109T072527_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_IOPM_2_20210109T073142_20210109T073530_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_IOPM_2_20210109T074936_20210109T075830_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_IOPM_2_20210109T075921_20210109T080234_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_IOPM_2_20210109T083955_20210109T085538_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_IOPM_2_20210109T085820_20210109T090303_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_IOPM_2_20210109T090325_20210109T090446_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_IOPM_2_20210109T090915_20210109T093616_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_IOPM_2_20210109T100134_20210109T100508_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_IOPM_2_20210109T100917_20210109T103522_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_IOPM_2_20210109T104209_20210109T104218_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_IOPM_2_20210109T104224_20210109T104549_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_IOPM_2_20210109T104813_20210109T111547_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_IOPM_2_20210109T114844_20210109T121459_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_IOPM_2_20210109T121635_20210109T122118_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_IOPM_2_20210109T122123_20210109T122454_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_IOPM_2_20210109T122853_20210109T130247_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_IOPM_2_20210109T134725_20210109T134933_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_IOPM_2_20210109T135133_20210109T135425_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_IOPM_2_20210109T135625_20210109T140147_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_IOPM_2_20210109T140737_20210109T142953_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_IOPM_2_20210109T143239_20210109T144151_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_IOPM_2_20210109T145428_20210109T145751_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_IOPM_2_20210109T151359_20210109T151943_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_IOPM_2_20210109T152037_20210109T153349_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_IOPM_2_20210109T153554_20210109T154046_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_IOPM_2_20210109T154655_20210109T161917_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_IOPM_2_20210109T164131_20210109T164400_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_IOPM_2_20210109T164530_20210109T170826_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_IOPM_2_20210109T171800_20210109T171953_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_IOPM_2_20210109T172630_20210109T173255_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_IOPM_2_20210109T174856_20210109T175634_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_IOPM_2_20210109T181158_20210109T181505_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_IOPM_2_20210109T181733_20210109T183300_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_IOPM_2_20210109T183514_20210109T185008_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_IOPM_2_20210109T185652_20210109T185907_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_IOPM_2_20210109T185946_20210109T190405_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_IOPM_2_20210109T190548_20210109T192044_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_IOPM_2_20210109T192223_20210109T192503_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_IOPM_2_20210109T192505_20210109T193645_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_IOPM_2_20210109T200035_20210109T200721_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_IOPM_2_20210109T200752_20210109T200954_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_IOPM_2_20210109T201647_20210109T203149_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_IOPM_2_20210109T203444_20210109T204311_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_IOPM_2_20210109T204527_20210109T210813_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_IOPM_2_20210109T214404_20210109T221118_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_IOPM_2_20210109T221635_20210109T222122_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_IOPM_2_20210109T222359_20210109T222653_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_IOPM_2_20210109T222818_20210109T225026_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_IOPM_2_20210109T232303_20210109T234905_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_IOPM_2_20210109T235556_20210110T000151_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_IOPN_2_20210109T145311_20210109T145402_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_IOPR_2_20210108T235311_20210109T000057_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_IOPR_2_20210109T031026_20210109T031312_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_IOPR_2_20210109T054847_20210109T055544_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_IOPR_2_20210109T095537_20210109T095816_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_IOPR_2_20210109T103523_20210109T103546_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_IOPR_2_20210109T104704_20210109T104812_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_IOPR_2_20210109T122614_20210109T122852_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_IOPR_2_20210109T150319_20210109T150515_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_IOPR_2_20210109T230012_20210109T230121_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_IOPR_2_20210109T232111_20210109T232125_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	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.

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Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20210109T004242_20210109T004628_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_IOPN_2_20210109T010903_20210109T011237_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_IOPN_2_20210109T012819_20210109T012936_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_IOPN_2_20210109T014346_20210109T014527_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_IOPN_2_20210109T025209_20210109T025510_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_IOPN_2_20210109T035934_20210109T040335_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_IOPN_2_20210109T044854_20210109T045105_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_IOPN_2_20210109T045211_20210109T045329_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_IOPN_2_20210109T062659_20210109T063055_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_IOPN_2_20210109T064539_20210109T064919_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_IOPN_2_20210109T071656_20210109T071840_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_IOPN_2_20210109T072528_20210109T073141_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_IOPN_2_20210109T074334_20210109T074936_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_IOPN_2_20210109T080235_20210109T080357_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_IOPN_2_20210109T080619_20210109T080655_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_IOPN_2_20210109T080724_20210109T081133_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_IOPN_2_20210109T082935_20210109T083110_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_IOPN_2_20210109T085615_20210109T085820_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_IOPN_2_20210109T090447_20210109T090807_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_IOPN_2_20210109T094356_20210109T094519_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_IOPN_2_20210109T094606_20210109T094955_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_IOPN_2_20210109T100515_20210109T100642_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_IOPN_2_20210109T100714_20210109T100917_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_IOPN_2_20210109T104549_20210109T104703_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_IOPN_2_20210109T130247_20210109T130411_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_IOPN_2_20210109T132525_20210109T132609_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_IOPN_2_20210109T133534_20210109T133626_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_IOPN_2_20210109T135458_20210109T135624_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_IOPN_2_20210109T154047_20210109T154412_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_IOPN_2_20210109T171525_20210109T171800_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_IOPN_2_20210109T171953_20210109T172327_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_IOPN_2_20210109T181505_20210109T181733_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_IOPN_2_20210109T185047_20210109T185652_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_IOPN_2_20210109T194500_20210109T194538_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_IOPN_2_20210109T194959_20210109T195213_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_IOPN_2_20210109T201226_20210109T201647_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_IOPN_2_20210109T212913_20210109T213404_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_IOPN_2_20210109T221544_20210109T221635_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_IOPN_2_20210109T225027_20210109T225146_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_IOPR_2_20210108T235311_20210109T000057_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_IOPR_2_20210109T004001_20210109T004242_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.

20         PML BR (JPML 2 2021010710142 2021010701444 C001)         Phone Mitching and Business Conf. 2014 Conf. Phone Mitching And Pho	CS_OFFL_SIR_IOPR_2_20210109T005953_20210109T010455_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
SQUIT_CONC_CARD VIEW ON DESCRIPTION CONCERNING CONTINUES (CONTINUES CONTINUES CONTI	CS_OFFL_SIR_IOPR_2_20210109T013327_20210109T014142_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
ng_peng_peng_peng_peng peng peng peng peng peng peng peng	CS_OFFL_SIR_IOPR_2_20210109T014320_20210109T014345_C001		
Big DP Call UNC_CAL INFORMATION DATE         DOES addresser Callsy         Inso reset.           C3. 0FL SR 10FR 2_0010718282 X201007183132 C081         Does Allinks Fargs SRA, NWL ALL INFORMATION DATE         The Overall Allinks Fargs SRA, NWL ALL INFORMATION DATE           C3. 0FL SR 10FR 2_0010718282 X20100718284 X201007182312 C081         Does Allinks Fargs SRA, NWL ALL INFORMATION DATE         The Overall Allinks Fargs SRA, NWL ALL INFORMATION DATE           C3. 0FL SR 10FR 2_0010718280 X20100718284 X20100718241 4.0001         Does Allinks Fargs SRA, NWL ALL INFORMATION DATE         The Overall Allinks Fargs SRA, NWL ALL INFORMATION DATE           C3. 0FL SR 10FR 2_0010718280 X20100718240 X201007178240 X201007178240 X201007178240 X20100718240 X201007182	CS_OFFL_SIR_IOPR_2_20210109T030430_20210109T030534_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CB, CHPL, SRL (OHE, 2, 2017 0007001400, 2007 0101070313 (2) (2001       Held Salta Alternative Alters (2) (2001 0007001400, 2007 0101070344) (2001)         CB, CHPL, SRL (OHE, 2, 2017 0007001400, 2007 0101070344 (2001)       Cole Alternative Alters (2) (2001 0007001400, 2007 0101070344) (2001)         CB, CHPL, SRL (OHE, 2, 2017 0007001400, 2007 0101070344 (2001)       Cole Alternative Alters (2) (2001 0007001400, 2007 0101070344) (2001)         CB, CHPL, SRL (OHE, 2, 2017 0007001400, 2007 01010703440, 2001)       Cole Alternative Alters (2) (2001 000700047, 2007 01010703440, 2001)         CB, CHPL, SRL (OHE, 2, 2017 0007001400, 2007 01010703400, C001)       Cole Alternative Alters (2) (2001 00070047, 2007 01010703400, 2001)         CB, CHPL, SRL (OHE, 2, 2017 000700047, 2007 01010703400, C001)       Cole Alternative Alters (2) (2001 00070047, 2007 01010703400, 2001)         CB, CHPL, SRL (OHE, 2, 2017 00070047, 2007 01010703400, C001)       Cole Alternative Alters (2) (2001 00070047, 2007 01010703400, 2001)         CB, CHPL, SRL (OHE, 2, 2017 00070047, 2007 0101070340, C001)       Cole Alternative Alters (2) (2001 00070047, 2007 0101070340, 2001)         CB, CHPL, SRL (OHE, 2, 2017 00070047, 2007 0101070340, C001)       Cole Alternative Alters (2) (2001 00070047, 2001 000700441, 2001 00070444, 2001)         CB, CHPL, SRL (OHE, 2, 2017 000700441, 2001 010703440, C001)       Cole Alternative Alters (2) (2001 01070441, 2001 01070444, 2001)         CB, CHPL, SRL (OHE, 2, 2021 0007106440, C001)       Cole Alternative Alters (2) (2001 01070444, 2001)         CB, CHPL, SRL (OHE, 2, 2021 0007106440, C001)	CS_OFFL_SIR_IOPR_2_20210109T030535_20210109T031023_C001		
C3_0FL_SR_0PR_2_30211001010400_201102414_0001       Mathematic Cubit PLAN COTOL Mathematic Cubit PLAN	CS_OFFL_SIR_IOPR_2_20210109T031026_20210109T031312_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SR_UOR_2_2021003700002_02100000_0001       Image: Source Amount Program Statestate County Program St	CS_OFFL_SIR_IOPR_2_20210109T031400_20210109T032414_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
C3_DFL_SR_UPR_2_X02101007000247_20210100700308_001       and Backscatter Caulity Flag Market See See See See See See See See See S	CS_OFFL_SIR_IOPR_2_20210109T045329_20210109T050055_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Ocean Altimeter Range, SSIA, SWH         The Opean Altimeter Range, SSIA, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_UOPR_2_202101007054142_20210100705444_C001         OCC6 Altimeter Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_UOPR_2_202101007054142_20210100705544_C001         OCC6 Altimeter Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_UOPR_2_20210100705448_20210100705554_C001         OCC6 Altimeter Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_UOPR_2_20210100705648_7_20210100705554_C001         OCC6 Altimeter Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_UOPR_2_20210100700588_20210100705654_C001         OCC6 Altimeter Range Quality PLRA, MURK           CS_OFFL_SIR_UOPR_2_20210100700588_20210100705756_C001         OCC6 Altimeter Range Quality PLRA, MURK           CS_OFFL_SIR_UOPR_2_20210100700588_20210100707376_C001         OCC6 Altimeter Range Quality PLRA, MURK           CS_OFFL_SIR_UOPR_2_2021010070780542_20210100707376_C001         OCC6 Altimeter Range Quality PLRA, MURK           CS_OFFL_SIR_UOPR_2_2021010070780142_20210100707376_C001         OCC6 Altimeter Range SIAL, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_UOPR_2_2021010070780142_202101007078152_C001         OCC6 Altimeter Range Guality PLRA, MURK           CS_OFFL_SIR_UOPR_2_20210100707801422_202101007078155_C001         OCC6 Altimeter	CS_OFFL_SIR_IOPR_2_20210109T050247_20210109T050508_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_DFL_SR_OPE_2.0210109109442_0210109109442_0201         OCC08 Backscatter Quality         more records.           CS_OFFL_SIR_IOPE_2_02101091094647_022101091095644_0001         more records.         more records.           CS_OFFL_SIR_IOPE_2_02101091094647_022101091095644_0001         DCC08 Advacatter Quality FLM, DCOO PLXM         The Occean Attimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPE_2_02210109109085830_02021010910908948_0001         OCC06 Attimeter Range Quality PLM, OCC06 Backscatter Quality         The OCC06 Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPE_2_02010109109109331_0201019109173755_0001         OCC06 Attimeter Range Quality PLM, OCC06 Backscatter Quality         The OCC06 Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPE_2_02010109109173531_0201019109173755_0001         OCC06 Attimeter Range Quality PLM, OCC06 Backscatter Quality         The OCC06 Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPE_2_02010109109133_020101091091432_0001         OCC06 Attimeter Range SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         The OCC06 Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPR_2_020101091091432_020101091091432_020101091091432_0001         DCC06 Attimeter Range SSHA, SWH and Backscatter Quality Flags have been PLKM         The OCC06 Range and Backscatter Quality Flags have been et or on or nor records.           CS	CS_OFFL_SIR_IOPR_2_20210109T053025_20210109T053052_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_JOPR_2_20210109T05447_20210109T05554_C001       Ind Backsatter Quality PLRN, QCCG       Ind Ducksatter Quality PLRN, QCCG       Ind Ducksatter Quality PLRN, QCCG         CS_OFFL_SIR_JOPR_2_20210109T06568_20210109T06554_C001       OCCG Altineter Range Quality PLRN, QCCG Backsatter Quality PL	CS_OFFL_SIR_IOPR_2_20210109T054434_20210109T054440_C001		
CS_OFFL_SIR_JOPR_2_20210109106086_02210109106086_0201         OCOG Backscatter Quality         more records.           CS_OFFL_SIR_JOPR_2_202101091060886_0201         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_JOPR_2_20210109107080402_2021010910707352         OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, CS_OFFL_SIR_JOPR_2_202101091080402_202101091080619_C001         OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_JOPR_2_202101091081432_202101091081432_C001         OCOG Altimeter Range and Backscatter Quality Flags and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_JOPR_2_202101091081432_202101091081841_C001         Ocean Altimeter Range and Backscatter Quality Flags and the COCOA Altimeter Range, SHA, SWH and Backscatter Quality Flag	CS_OFFL_SIR_IOPR_2_20210109T054847_20210109T055544_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_UPPL_SIR_UOPR_2_20210109T03531_20210109T073532_C001         CCOG Backscatter Quality         more records.           CS_OFFL_SIR_UOPR_2_20210109T03531_20210109T073532_C001         CCOG Altimeter Range Quality PLRM, CCOG Backscatter Quality         The OCOG Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_UOPR_2_20210109T080402_20210109T080432_C001         CCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, CCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, CCGG Altimeter Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_UOPR_2_20210109T081432_C0010         CCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, CCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, CCGG Altimeter Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_UOPR_2_20210109T081432_C0210109T081641_C001         CCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, CCGG Altimeter Ran	CS_OFFL_SIR_IOPR_2_20210109T060808_20210109T060948_C001		
CS_OFFL_SIR_IOPR_2_20210109108391_0210109108315_2001         OCOG Backscatter Quality         more records.           CS_OFFL_SIR_IOPR_2_202101091080402_202101091080619_C001         OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPR_2_202101091081133_202101091081432_C001         Decan Altimeter Range SSHA, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPR_2_202101091081432_202101091081442_C001         Decan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPR_2_202101091081641_C001         Decan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPR_2_202101091081641_C001         OCCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPR_2_202101091083217_202101091083955_C001         OCCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPR_2_2021010910926537_202101091095615_C001         OCCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPR_2_202101091112649_202101091113547_C001         OCCOA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_IOPR_2_202101091113647_C001         Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_IOPR_2_20210109T063830_20210109T063946_C001		
CS_OFFL_SIR_IOPR_2_202101091080402_202101091080402_202101091080402_202101091080402_202101091080402_202101091081432_c001         OCOG Backscatter Quality         more records.           CS_OFFL_SIR_IOPR_2_202101091081133_202101091081432_c001         Cean Altimeter Range and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLAW.           CS_OFFL_SIR_IOPR_2_202101091094956_202101091095515_C001         Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLAW.           CS_OFFL_SIR_IOPR_2_202101091095537_202101091095816_C001         Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLAW.           CS_OFFL_SIR_IOPR_2_202101091112649_202101091113547_C001         Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLAW.           CS_OFFL_SIR_IOPR_2_202101091131632_C001         Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLAW.               CS_OFFL_SIR_IOPR_2_202101091131542_C001	CS_OFFL_SIR_IOPR_2_20210109T073531_20210109T073752_C001		
CS_OFFL_SIR_JOPR_2_20210109T081133_20210109T081432_C001       and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_JOPR_2_20210109T081432_20210109T081841_C001       Cs_OFFL_SIR_JOPR_2_20210109T081432_20210109T081841_C001       The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_JOPR_2_20210109T081432_20210109T081841_C001       Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_JOPR_2_20210109T083217_20210109T083955_C001       OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_JOPR_2_20210109T094956_20210109T095515_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_JOPR_2_20210109T095537_20210109T095816_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_JOPR_2_20210109T1095537_20210109T113547_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_JOPR_2_20210109T1130617_20210109T113547_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_JOPR_2_20210109T1130617_20210109T1131547_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_JOPR_2_20210109T1131547_C001       Ocean Altimeter Range, SSHA, SWH and B	CS_OFFL_SIR_IOPR_2_20210109T080402_20210109T080619_C001		
CS_OFFL_SIR_IOPR_2_20210109T081432_20210109T081841_C001       and Backscatter Quality PLRM, COCG       Interfer Range and Backscatter Quality PLRM, COCG         Altimeter Range and Backscatter Quality PLRM, COCG       CS_OFFL_SIR_IOPR_2_20210109T083217_20210109T083955_C001       OCCG Altimeter Range and Backscatter Quality PLRM, COCG         CS_OFFL_SIR_IOPR_2_20210109T094956_20210109T095515_C001       OCCG Altimeter Range, SSHA, SWH       The OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T095515_C001       Occean Altimeter Range, SSHA, SWH       The OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T095537_20210109T095515_C001       Occean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T095537_20210109T095816_C001       Occean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T112649_20210109T113547_C001       Occean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T131239_C001       Occean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T131239_20210109T131542_C001       Occean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T131239_20210109T131542_C001 <td>CS_OFFL_SIR_IOPR_2_20210109T081133_20210109T081432_C001</td> <td>and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality</td> <td>and the OCOG Altimeter Range and Backscatter Quality Flags have been</td>	CS_OFFL_SIR_IOPR_2_20210109T081133_20210109T081432_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_202101091093217_20210109109335_C001       OCOG Backscatter Quality       more records.         CS_OFFL_SIR_IOPR_2_202101097094956_202101097095515_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, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality P	CS_OFFL_SIR_IOPR_2_20210109T081432_20210109T081841_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20210109T094956_20210109T095515_C001       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 Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quali	CS_OFFL_SIR_IOPR_2_20210109T083217_20210109T083955_C001		
CS_OFFL_SIR_IOPR_2_20210109T095537_20210109T095816_C001       and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM       and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM       The Ocean Attimeter Range and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM         CS_OFFL_SIR_IOPR_2_20210109T130617_20210109T131239_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM       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_IOPR_2_20210109T1310617_20210109T131239_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM       The Ocean Attimeter Range, SSHA, SWH and the OCOG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM         CS_OFFL_SIR_IOPR_2_20210109T131239_20210109T131542_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM       The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T131239_20210109T131542_C001       Ocean Attimeter Range Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags have been s	CS_OFFL_SIR_IOPR_2_20210109T094956_20210109T095515_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20210109T112649_20210109T113547_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 and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T131732_20210109T131939_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_IOPR_2_20210109T095537_20210109T095816_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20210109T130617_20210109T131239_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM       Ind OCGa Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T131239_20210109T131542_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T131732_20210109T131939_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_IOPR_2_20210109T131732_20210109T131939_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_IOPR_2_20210109T112649_20210109T113547_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20210109T131239_20210109T131542_C001       and Backscatter Quality PLRM, OCOG       The OCGal Attimeter Range, SSFA, SWH and Backscatter Quality Flags and the OCG Attimeter Range, SSFA, SWH and Backscatter Quality Flags and the OCG Attimeter Range and Backscatter Quality         CS_OFFL_SIR_IOPR_2_20210109T131732_20210109T131939_C001       OCOG Attimeter Range Quality PLRM, OCG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T131732_20210109T131939_C001       OCOG Attimeter Range Quality PLRM, OCG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T131732_20210109T131939_C001       OCOG Attimeter Range Quality PLRM, OCG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20210109T131732_20210109T131939_C001       OCOG Attimeter Range Quality PLRM, OCG Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_IOPR_2_20210109T130617_20210109T131239_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_202101091131732_202101091131939_C001 OCOG Backscatter Quality more records. OCOG Altimeter Range Quality PLRM, The OCOG Range and Backscatter Quality Flags have been set for one or	CS_OFFL_SIR_IOPR_2_20210109T131239_20210109T131542_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_IOPR_2_20210109T131732_20210109T131939_C001		
	CS_OFFL_SIR_IOPR_2_20210109T132352_20210109T132507_C001		

CS_OFFL_SIR_IOPR_2_20210109T140458_20210109T140736_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_IOPR_2_20210109T144151_20210109T145139_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_IOPR_2_20210109T145925_20210109T150101_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_IOPR_2_20210109T154412_20210109T154654_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_IOPR_2_20210109T162021_20210109T162222_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_IOPR_2_20210109T162408_20210109T163038_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_IOPR_2_20210109T163038_20210109T163615_C001	Ocean Attimeter 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_IOPR_2_20210109T163703_20210109T164131_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_IOPR_2_20210109T170827_20210109T171525_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_IOPR_2_20210109T175959_20210109T180001_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_IOPR_2_20210109T180321_20210109T180852_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_IOPR_2_20210109T183300_20210109T183514_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_IOPR_2_20210109T194306_20210109T194359_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_IOPR_2_20210109T194710_20210109T194959_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_IOPR_2_20210109T195214_20210109T195402_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_IOPR_2_20210109T195614_20210109T195725_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_IOPR_2_20210109T195920_20210109T200035_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_IOPR_2_20210109T203150_20210109T203254_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_IOPR_2_20210109T210813_20210109T210919_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_IOPR_2_20210109T212250_20210109T212913_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_IOPR_2_20210109T213436_20210109T213706_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_IOPR_2_20210109T214148_20210109T214404_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_IOPR_2_20210109T221119_20210109T221229_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_IOPR_2_20210109T222336_20210109T222358_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_IOPR_2_20210109T230425_20210109T230937_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_IOPR_2_20210109T234906_20210109T235157_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.

Currently, there are several common flags raised in the Level 2 products, which are summarised below.

208

156

0

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

5.8 L2 Ocean Retracking Qua	lity Check
L2 Retracking Flags (20Hz)	
CryoSat L2 data includes an ocean retracki	ng 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 over land and sea ice, but this is to be expected. The number of products with this error flag set is given below.
Number of products with errors:	63

## 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 IOPR and IOPN products over sea ice, but this is to be expected.

Number of products with errors:

## 6. IOP L2 Pole-to-Pole Data Quality Check

#### 6.1 P2P 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 NetCDF product file (.nc).

Number of products with errors:

#### 6.2 P2P 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.

#### 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

#### 6.4 P2P 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. The affected products are not reported in the table below.

> Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.

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

29

> 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_IOP_220210108T235715_20210109T004651_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)
CS_OFFL_SIR_IOP_220210109T004651_20210109T013630_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)
CS_OFFL_SIR_IOP_220210109T013630_20210109T022606_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)
CS_OFFL_SIR_IOP_220210109T022606_20210109T031545_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)
CS_OFFL_SIR_IOP_220210109T031545_20210109T040521_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)
CS_OFFL_SIR_IOP_220210109T040521_20210109T045459_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)
CS_OFFL_SIR_IOP_220210109T045459_20210109T054435_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)
CS_OFFL_SIR_IOP_220210109T054435_20210109T063414_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)
CS_OFFL_SIR_IOP_220210109T063414_20210109T072350_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)
CS_OFFL_SIR_IOP_220210109T072350_20210109T081329_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)
CS_OFFL_SIR_IOP_220210109T081329_20210109T090304_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)
CS_OFFL_SIR_IOP_220210109T090304_20210109T095243_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)
CS_OFFL_SIR_IOP_220210109T095243_20210109T104219_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)

CS_OFFL_SIR_IOP_2_20210109T113158_20210109T122134_C001 Mean Sea Surface (1), Me Topography (1)	ean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20210109T122134_20210109T131113_C001 Mean Sea Surface (1), Me Topography (1)	ean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220210109T131113_20210109T140049_C001 Mean Sea Surface (1), Me Topography (1)	ean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220210109T140049_20210109T145027_C001 Mean Sea Surface (1), Me Topography (1)	ean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20210109T145027_20210109T154003_C001 Mean Sea Surface (1), Mean Sea Su	
CS_OFFL_SIR_IOP_220210109T154003_20210109T162942_C001 Mean Sea Surface (1), Me Topography (1)	ean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220210109T162942_20210109T171918_C001 Mean Sea Surface (1), Me Topography (1)	ean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220210109T171918_20210109T180857_C001 Mean Sea Surface (1), Me Topography (1)	ean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20210109T180857_20210109T185832_C001 Mean Sea Surface (1), Mean Sea Su	
CS_OFFL_SIR_IOP_220210109T185832_20210109T194811_C001 Mean Sea Surface (1), Mean Sea S	
CS_OFFL_SIR_IOP_220210109T194811_20210109T203747_C001 Mean Sea Surface (1), Me Topography (1)	ean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20210109T203747_20210109T212726_C001 Mean Sea Surface (1), Me Topography (1)	ean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20210109T212726_20210109T221702_C001 Mean Sea Surface (1), Mean Sea Su	
CS_OFFL_SIR_IOP_220210109T221702_20210109T230641_C001 Mean Sea Surface (1), Me Topography (1)	ean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
Mean Sea Surface (1), Me Topography (1), Total Gee CS_OFFL_SIR_IOP_2_20210109T230641_20210109T235617_C002 Tide (GOT), Total Geocer Tide (FES), Non-Equilibrit Ocean Tide	ocentric Ocean htric Ocean htric Ocean tric Ocean

1

#### 6.5 P2P Measurement Confidence Data Check

CryoSat P2P data includes a measurement confidence flag for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

0

Number of products with errors:

#### 6.6 P2P Measurement Quality Flag Check

#### P2P Quality Flags (20Hz)

CryoSat P2P data includes Quality Flags for each 20 Hz, 20 Hz PLRM and 1 Hz measurement record, copied from the corresponding L2 products. Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. Number of products with errors: 30 P2P Quality Flags (20Hz PLRM) Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. Number of products with errors: 28 P2P Quality Flags (1 Hz & 1Hz PLRM) Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. Number of products with errors: 29 6.8 P2P Ocean Retracking Quality Check P2P Retracking Flags (20Hz) Cryosat P2P data includes an ocean retracking quality flag (field 19) for each 20-Hz 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 IOPR and IOPN products over sea ice, but this is to be expected. Number of products with errors: 25

#### P2P Retracking Flags 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 IOPR and IOPN products over sea ice, but this is to be expected.

29

Number of products with errors:

## 7. IOP 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_IOPM1B	210	210	2	208	0

136	103	2	101	0
103	136	0	136	0
210	210	149	61	0
136	103	37	66	0
103	136	44	91	1
29	29	0	28	1
	103 210 136 103	103         136           210         210           136         103           103         136	103         136         0           210         210         149           136         103         37           103         136         44	10313601362102101496113610337661031364491

## 7.1 QCC Errors

Number of QCC reports with errors:

Total number of or of each

8

							l otal number	of occurrences	of each error				
Product Type	RLOBOPN	DF	RL	RLOBO	OPNCDF	PNCDF RL						-	
SIR_IOPR_2	1		1		1	1							
Product Type	RLOBOPN	DF	RL	RLOBO	OPNCDF	RL	-	-	-	-	-	-	-
SIR_IOP_2_	1		1		1	1							
Test Descriptio	n Key:												
Abbreviation	Te	Test name				Details							
RLOBOPNCDF	Ra	RangeLatitudeOrBlankOP_7NetCDF			eOrBlankOP_7NetCDF Latitude should be between -90E7 and 90E7								
RL	Ra	ngeLatif	tude_7			Latitude should be between -90E7 and 90E7							
RLOBOPNCDF	Ra	ngeLon	gitudeOrBlankOF	P_7NetCE	DF	Longitude should be between -180E7 and 180E7							
RL	Ra	ngeLon	gitude_7			Longitude should b	ongitude should be between -180E7 and 180E7						
						•							

## 7.2 QCC Warnings

nber of QCC repo	rts with warnings	2225	Total num	per of occurrences of ea	ach warning		
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMN
SIR IOPM1B	208	0	0	0	0	0	0
SIR_IOPM_2	0	0	40	44	0	47	0
SIR_IOPN1B	100	0	0	0	0	0	0
SIR IOPN 2	0	0	14	33	3	28	27
SIR IOPR1B	133	0	0	0	0	0	0
SIR_IOPR_2	0	1	24	52	2	26	18
Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	41	0	37	0	0	0	0
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	21	1	0	0	24	0	36
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	11	1	0	49	0	53	0
Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	32	0	0	7	25	0	3
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	0	0	27	8	39	48	30
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	0	48	0	2	62	34	15
			-		i		r
Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNC		SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF
SIR_IOPM1B	0	0	0	1	0	0	0
SIR_IOPM_2	35	0	2	1	0	0	0
SIR_IOPN1B	0	0	0	0	0	48	4
SIR_IOPN_2	28	26	8	0	1	0	0
SIR_IOPR1B	0	0	0	0	0	136	6
SIR_IOPR_2	34	44	2	0	4	0	0
	IOHHMOOR	WWOEDEDWODE	WWOEDWODE	MU/ONODE	DD070D0FDFDN0DF	RBSZOPOEPFDPLRMNO	
Product Type		MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF		
SIR_IOP_2_	15	27	29	4	29	18	28
Product Type	RNELPOTONCDF	RPEPOPFDPLRMSINN	CDIRPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
SIR IOP 2	2	17	28	23	15	29	18
	2		20	20	10	20	10
Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	-

Abbreviation	Test name	Details
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter
OHHMOOR	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
NVIOEPNCDF	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
	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitude: between -70 and 70 degrees
RBSZOPOEPFDPLRM	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitude between -70 and 70 degrees
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitude between -70 and 70 degrees
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for 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	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
	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 decrees
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
	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_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch
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