

# IDEAS+ Daily Report for IOP data:

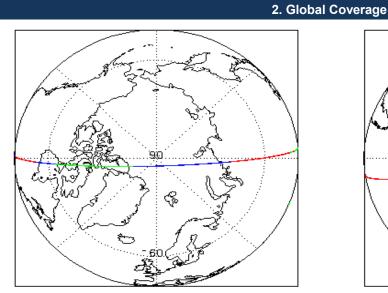
# <u>07/07/2019</u>

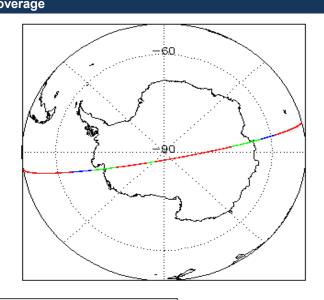
	<u></u>	
1. Overview		
Check	L1 & L2	P2P
er check: science-pds.cryosat.esa.int	Nominal	Nominal

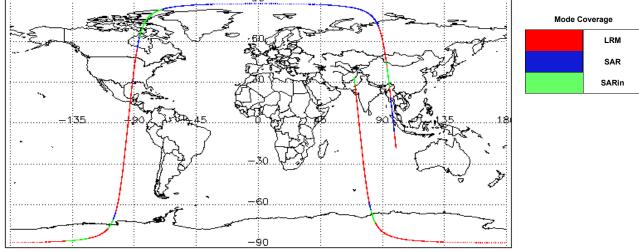
IDEAS+

Report Production:         10-Jul-2019	10 101 2010	Check	L1 & L2	P2P
	Server check: science-pds.cryosat.esa.int	Nominal	Nominal	
Processor Used:	Cruce Set Occar Dresser	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Used.	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal
Data Usadu	Data Used:         Intermediate Ocean Products (IOP)           L1B, L2 & P2P Science Data	Product Format Check	Nominal	Nominal
Data Useu.		Product Header Analysis	See Section 4.2	See Section 6.2
		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	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

Mission / Instrument News		
06-Jul-2019	None	
07-Jul-2019	SIRAL unavailability on 07-Jul-2019 from 01:53:23 to 08-Jul-2019 07:47:50 due to a unplanned platform anomaly.	
08-Jul-2019	SIRAL unavailability on 07-Jul-2019 from 01:53:23 to 08-Jul-2019 07:47:50 due to a unplanned platform anomaly.	







## 3. Instrument Configuration

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

SIRAL - A

0

SIRAL instrument(s) in use:

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).

Number of products with errors:

The standards as a for the defined tables are performed on the MPH and SPH in order to binding with increasing quarks Jul freed in not correctly outplaced in the correct standard in the proceed-segment processing dual.   18 Processing Quarky Hift The Higgs (Page), Page In the yes cannelly set of 1:00 OPT and DPM			
	4.2 L1B Product Header Analysis		
SAME and any answer of an angle and any angle	For all products, a series of pre-defined checks are performed on the MPH and	d SPH in order to identify any inconsistencies a	nd/or errors raised by the ground-segment processing chain.
A 3 L1 B Auxiliary Data File Usage Check  Table product is devided for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.  Where or products with encores:  4 4 L L4 B Auxiliary Correction Error Check  Cycle L1 data baseline and the data methods are and measurement record. The bit value of the flag indicates any problems when set.  4 A L1B Auxiliary Correction Error Check  5 A L1 DF Auxiliary Data Files Usage of the data indicates any problems when set.  4 A L1B Auxiliary Correction Error Check  5 A L1 DF Auxiliary Data Files Usage of the data indicates any problems when set.  4 A L1B Auxiliary Correction Error Check  5 A L1D Product House a whence and the products out is an or ording motion issue. This is being indicates any problems when set.  4 A L1D Auxiliary Correction Error Check  5 A L1D Product Format Check  5 A L1D Product House a whence and the data whence and the data with the out of the flag indicates any problems when set.  4 A L1D Auxiliary Correction Error Check  5 A L1D Product House a whence and the products out is to be expected.  5 A L1D Product House Auxiliary Correction Error Check  5 A L1D Product House Auxiliary Correction Error Check  5 A L1D Product House Auxiliary Correction Error Check  5 A L2 Product House Auxiliary Correction Error Check  5 A L2 Product House Auxiliary Correction Error Check  5 A L2 Auxiliary Data Bit La Basel products with an oracle a pro-demonsed baseling and also to check the validity of Auxiliary Data Files is correct.  5 A L2 Auxiliary Data Bit La Basel Check  5 A L2 Auxiliary Data Bit La Basel Check  5 A L2 Auxiliary Data Bit La Basel Check  5 A L2 Auxiliary Data Bit La Basel Check  5 A L2 Auxiliary Data Bit La Basel Check  5 A L2 Auxiliary Data Bit La Basel Check  5 A L2 Auxiliary Data Bit La Basel Check  5 A L2 Auxiliary Data Bit La Basel Check  5 A L2 Auxiliary Data Bit La Basel Check  5 A L2 Auxiliary Data Bit La Basel Check  5 A L2 Auxiliary Data Bit La Basel Check  5 A	L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1I OSARIn chains. A modification is required in the next release.	B IOPR and IOPN products because the I1b_pr	ocessing_quality_hr field is not correctly configured in the OSAR and
A product so that we for each measurement excert. The bit value of this flag indicates any problems when ext. The product so that each measurement excert. The bit value of this flag indicates any problems when ext. The product so that each measurement excert. The bit value of this flag indicates any problems when ext. The product so that each measurement excert. The bit value of this flag indicates any problems when ext. The product so that each measurement excert. The bit value of this flag indicates any problems when ext. The product so that each excert is not each excert (OPP product due to a configuration issue. The is then you excert and the bit product and the correct.  Excert product and the bit product and the bit product and the bit product and the recore and bit product and the correct.  Excert product an	Number of products with errors: 0		
Section 2000 Control 100 Contro	4.3 L1B Auxilary Data File Usage Check		
A 1 L1 B Auxiliary Correction Error Check  Crows and the source of a control of a c	Each product is checked for missing Data Set Descriptors with respect to a pre	e-determined baseline and also to check the va	idity of Auxiliary Data Files is correct.
Dryslet L1B data induces a correction error frag for each measurement record. The bit value of this flag indicates any problems when set.           Statistical Correction Missing: The flag is currently set in error for IOPP products due to a configuration taxe. This is being investigated and will be updated in the next SW update.           Statistical Correction Missing: The flag is currently set in error for IOPP products due to a configuration taxe. This is being investigated and will be updated in the next SW update.           Statistical Correction Missing: The flag is currently set in error for IOPP products due to a configuration taxe. This is being investigated and will be updated in the next SW update.           Statistical Correction Missing: The flag is currently set for products over land. Lub this is to be expected.           Statistical Correction Missing: The flag is currently set for products over land. Lub this is to be expected.           Statistical Correction Missing: The flag is currently set for products over land. Lub this is to be expected.           Statistical Correction Correction Missing: The flag is currently set for products over land. Lub this is to be expected.           Statistical Correction Correction Correction Set for products over land. Due MPH and SPH in order to identify any inconsidencies and/or rarise by the ground segnet processing duals.           Statistical Correction Error Check         0           Statistical Correction Error Check         0           Statistical Correction Error Check Correction error rarised in the Lowel Derived Set with recess correction and sets to their it is to be expecided.           Statistical	Number of products with errors: 0		
Number of products with errors: 0   4.5.15.16 dust induces a measurement confidence Data Check   DyoBail 1.16 dust induces a measurement confidence big for each measurement record. The bit value of this flag indicates any problems when set.   Number of products with errors: 0    4.5.15.16 dust induces a measurement confidence bit is to be expedied.   DyoBail 1.16 dust induces a waveform data flag for each measurement record. The bit value of this flag indicates any problems when set.   Less of Experiment of products with errors: 0 <b>5.10P Level 2 Data Qualify Checks 5.10P Level 2 Data Qualify Checks 5.10P Check 1 Data Rubin experiment record. The bit value of this flag indicates any problems when set. Less of the product with errors:   0 0     <b>5.10P Check 1 Data Qualify Checks 5.10P Check 1 Data Qualify Checks 5.10P Check 1 Data Qualify Checks 5.12 Product Header A Analysis 5.12 Product Header Analysis 5.12 Product Header Analysis 5.12 Product Header Analysis 6.12 Product Header Anal</b></b>	4.4 L1B Auxiliary Correction Error Check		
As LIB Measurement Confidence Data Check CryoSa LIB data includes a measurement confidence hap for each measurement record. The bit value of this flag indicates any problems when set. Xatabak correction filasing: This flag is currently set on error for IOPR products due to a configuration issue. This is being investigated and will be updated in the next SW update. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, but this is to be capacide. Xatabak correction filasing: This flag is currently set for products over land, and also to check the validity of Auxiliary Data File is correct. Xatabak correction filesing: Currently multiply correction errors received to a fuel fag fuel and value correction. Xatabak correction: Currently flags for products over land and sale to check the validity of Auxiliary Data File is corre	CryoSat L1B data includes a correction error flag for each measurement recor	d. The bit value of this flag indicates any proble	ms when set.
Degradual LB data includes a measurement confidence flag for each measurement record. The bit value of this flag indicates any problems when set.  Attitude Correction Missing: The flag is currently set in error for ICPR products due to a configuration iesue. This is being investigated and will be updated in the next SW update.  Add LLB Maveform Group Data Check  Decoded with errors:  0  4.4 CLB Maveform Group Data Check  Decoded with errors: 0  4.5 LOP Level 2 Data Quality Check  5.1 L2 Product Format Check  5.1 L2 Product Format Check  5.1 L2 Product Header Analysis  For all modules, a server is checked to ensure it consists of both an XML header file (HDR) and a binary product file (DBL).  Number of products with errors: 0  5.2 L2 Product Header Analysis  For all module, inferences 0  5.3 L2 Availing y Data Set Decorptory 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 Availiary Data Set Decorptory 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 Availiary Data Set Decorptory 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 Availiary Data Set Decorptory 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 Availiary Data Set Decorptory 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 Availiary Data Set Decorptory 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 Availiary Data Set Decorptory with respect to a pre-determined baseline and also to check the validity of Auxiliary Data File is a former of the bi	Number of products with errors: 0		
Attribute Correction Nissing: This flag is currently set in error fro IOPR products due to a configuration insue. This is being investigated and will be updated in the next SW update.           Attribute of products with errors:         0           Att	4.5 L1B Measurement Confidence Data Check		
Number of products with errors: 0   A 5. LOP Level 2 Data Quality Checks.   Low of the last includes a waveform data flag for each measurement record. The bit value of this flag includes any products with enset.   Low of the last includes a waveform data flag for each measurement record. The bit value of this flag includes any products with enset.   Low of the last includes a waveform data flag for each measurement record. The bit value of this flag includes any products with enset.   D <b>S. LOP Level 2 Data Quality Checks</b> S.12 Product Format Check   Each product, retrieved and unpeaked form the science server, is checked to ensure it consists of both an XML header file (HDR) and a binary product file (DBL).   Number of products with enset:   D   S.12 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 ensor raised by the ground segment processing data.   Number of products with enset:   D   S.12 Auxiliary Data Elles is correct.   Number of products with enset:   D   S.12 Auxiliary Correction Error Checks   To all products with an one:   D   S.12 Auxiliary Outer Check within the Geophysical Group are checked for the default entro value (5277).   Corrections auxiliary corrections errors raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list backs.   Auxiliary Hear Corrections:   S. Sistes S & Sea Siste Bise PLRM: The entro value is correlity entro products were sea ice. but this is to be expected.	CryoSat L1B data includes a measurement confidence flag for each measurer	nent record. The bit value of this flag indicates a	any problems when set.
A series of products with errors:		-	
Comparison of the data includes a waveform data flag for each measurement record. The bit value of this flag indicates any problems when eat. Loss of Echo Flag: This flag is currently set for products over land, but this is to be expected.  Number of products with errors:	Number of products with errors: 0		
Les of Echo Flag: This flag is currently set for products over land, but this is to be expected. Number of products with errors:	4.6 L1B Waveform Group Data Check		
Number of products with errors:       0         S.I.OP Level 2 Data Qualify Check         S.I.OP Level 2 Data Qualify Check         S.I.OP Control 1	CryoSat L1B data includes a waveform data flag for each measurement record	d. The bit value of this flag indicates any problem	ns when set.
S. IOP Level 2 Data Quality Check S.1 L2 Product Format Check Cather products with errors:	Loss of Echo Flag: This flag is currently set for products over land, but this is	to be expected.	
Solar 2 Product Format Check Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (HDR) and a binary product file (DBL). Number of products with errors:  O  Solar 2 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:  O  Solar 2 Auxiliary Data File Usage Check Each product is checked for missing Data Set Descriptors with respect to a pre-defermined baseline and also to check the validity of Auxiliary Data Files is correct. Number of products, with errors:  O  Solar 2 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 corrections errors raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, lower a some common auxiliary corrections errors raised for the default error value (32767). Currently, there are some common auxiliary corrections errors raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, lower 2 and use to expected.  Performed to expected the distant error value is currently set for products over sea lee, but this is to be expected.  Namber of products with errors:  Performed to expected.  Product The error value is currently set for products over land and sea lee, but this is to be expected.  Number of products with errors:  Performed to Expect The error value is currently set for products over land and sea lee, but this is to be expected.  Number of products with errors:  Performed to error are leads of the Comparise of the error walue is currently set for products over land and ase lee, but this is to be expected.  Performed to error value is currently set for products ov	Number of products with errors: 0		
Solar 2 Product Format Check Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (HDR) and a binary product file (DBL). Number of products with errors:  O  Solar 2 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:  O  Solar 2 Auxiliary Data File Usage Check Each product is checked for missing Data Set Descriptors with respect to a pre-defermined baseline and also to check the validity of Auxiliary Data Files is correct. Number of products, with errors:  O  Solar 2 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 corrections errors raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, lower a some common auxiliary corrections errors raised for the default error value (32767). Currently, there are some common auxiliary corrections errors raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, lower 2 and use to expected.  Performed to expected the distant error value is currently set for products over sea lee, but this is to be expected.  Namber of products with errors:  Performed to expected.  Product The error value is currently set for products over land and sea lee, but this is to be expected.  Number of products with errors:  Performed to Expect The error value is currently set for products over land and sea lee, but this is to be expected.  Number of products with errors:  Performed to error are leads of the Comparise of the error walue is currently set for products over land and ase lee, but this is to be expected.  Performed to error value is currently set for products ov	5. 10	P Level 2 Data Quality Che	eck
Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (HDR) and a binary product file (DBL). Number of products with errors:			
Number of products with errors:         0           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, the auxiliary corrections 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 lissues which may arise from this test.           Perfure are some common auxiliary corrections are not computed over CONTINENTAL ICE. Dry Tropospheric Correction, Wet Tropospheric Correction, Horerse Barometric Correction and the U-Wind and W-Wind componenties of the ECMWF model with versor: The sis at Known anomaly (CRVO-COP-3) and will be resolved in a future IPF update. The effected products are not reporter in the table below.           > eSMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE. Dry Tropospheric Correction, Wet Tro			
For all products, a series of pre-defined thecks 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:		ensure it consists of both an XML header file (.F	IDR) and a binary product file (.DBL).
For all products, a series of pre-defined thecks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. Number of products with errors:	5.2.1.2. Product Hander Analysia		
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 correction swithin 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 form this test.         > CHMF Meteo Corrections:       Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Correction, Wet Tropospheric Correction, Inverse Barometric Correction and the LVWind 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 reporter in the table below.         > Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over land and sea ice, but this is to be expected.         > Mean Spannic Topography: The error value is currently set for products over land and sea ice, but this is to be expected.         > Altimetric Wind Speed Error:       a         > CorperLy, SIR_ JOPN_2_20190707T003120_20190707T003710_C001       Mean Sea Surface (1), Mean Dynamic Topography (1), Teal Geocentric Ocean <td< td=""><td>•</td><td></td><td></td></td<>	•		
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       0         For all products, the 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 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 reporter to the table below.         > Sea State Bias Sea State Bias PLRM: The error value is currently set for products over land and 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.         > Mean State Bias PLRM: The error value is currently set for products over land and sea loe, but this is to be expected.         > Mean State Bias PLRM: The error value is currently set for products over land and sea loe, but this is to be expected.         > Mean State Bias PLRM: The error value is currently set for products over land and sea loe, but this is to be expected.         > Scate Files IR_IOPN_2_201907077003120_201907077003710_0001		D SPH in order to identify any inconsistencies a	nd/or errors raised by the ground-segment processing chain.
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).  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.  For all products of the Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Correction, 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.  See State Bias & See 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.  Mean Sea Surface The error value is currently set for products over land and sea ice, but this is to be expected.  Mumber of products with errors: 3  Product CS_OFFL_SIR_IOPN_2_20190707T00310_20190707T003710_C001 Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (solution 1), the Mean Dynamic Topography (1) There is an error with the Mean Dynamic Topography height for one or CS_OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_C001 Mean Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1), and the Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Mean Dynamic			
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).         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 their stats.         > CMWF Meteo Corrections:       Currently the following corrections are not computed over CONTINENTALICE: Dry Tropospheric Correction, Wet Tropospheric Correction, Inverse Barometric Correction in the table below.         > CMWF Meteo Corrections:       Currently the following corrections are not computed over CONTINENTALICE: Dry Tropospheric Correction, Wet Tropospheric Correction, Inverse Barometric Correction in the table below.         > Sattle Bias & Sate Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.         > Mean Saurface: The error value is currently set for products over land and sea ice, but this is to be expected.         > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.         Number of products with errors:       3         Product       Test Failed       Description         CS_OFFL_SIR_IOPN_2_20190707T003210_20190707T003710_C001       Topography (1), Total Geocentric Ocean       Topography (solution 1), the Total Geocentric Cocean Tide (solution 1); GOT (or one or more records	5.3 L2 Auxiliary Data File Usage Check		
5.4 L2 Auxiliary Correction Error Check For all products, the auxiliary corrections within the Geophysical Group are checked for the default error value (32767). Currently, there are some common auxiliary correction errors raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.  > ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Correction, Wet Tropospheric Correction, Inverse Barometric Correction and the U-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.  > Seatse 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. > Altimetric Wind Speed Error: 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. > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected. > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected. Number of products with errors: 3  Product Test Failed Test		e-determined baseline and also to check the va	lidity of Auxiliary Data Files is correct.
For all products, the axiliary 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 Correction, Wet Tropospheric Correction, Inverse Barometric Correctio 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 Blas & Sea State Blas 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.  > Mean Sea Surface The error value is currently set for products over land and sea ice, but this is to be expected.  > Attimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.  > Attimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.  > Attimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.  > Mean Sea Surface (1), Mean Dynamic Copography (solution 1), the Total Geocentric Ocean Topography (solution 1), the Total Geocentric Ocean Topography (solution 1), the Total Geocentric Ocean Topography (solution 1), the Total Geocentric Ocean Total Geocentric Cocean Copography (1), Total Geocentric Cocean Total Geocentric Cocean Total Geocentric Cocean Copography (1), Total Geocentric Cocean Total Ge	Number of products with errors: 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.	5.4 L2 Auxiliary Correction Error Check		
Solowed 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.         > Mean Dynamic Topography: The error value is currently set for products over land and sea ice, but this is to be expected.         > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.         Number of products with errors:       3         Product       Test Failed       Description         CS_OFFL_SIR_IOPN_2_20190707T003120_20190707T003710_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1), the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_C001       Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1), Mean Dynamic Topography (1)	For all products, the auxiliary corrections within the Geophysical Group are che	ecked for the default error value (32767).	
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. > Attimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected. > Attimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected. > Attimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected. Number of products with errors: 3 Product CS_OFFL_SIR_IOPN_2_20190707T003120_20190707T003710_C001 CS_OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_C001 Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (2) Mean Sea Surface (1), Mean Dynamic Topography (2) Mean Sea Surface (1), Mean Dynamic Topography (2) There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1) CS_OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_C001 Mean Sea Surface (1), Mean Dynamic Topography (2) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (2) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (2) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (2) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (2) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (2) Mean Sea Surface (2), Mean Dynamic There is an error with the MSS heigh			to surface type. All common flags are summarised in the list below,
A Mean Sea Surface: The error value is currently set for products over land and sea ice, but this is to be expected.     A Mean Dynamic Topography: The error value is currently set for products over land and sea ice, but this is to be expected.     Attimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.     Number of products with errors:     a      Product     Test Failed     Description     There is an error with the MSS height (solution 1), the Mean Dynamic     Topography (1), Total Geocentric Ocean     Tide (GOT)     Mean Dynamic Topography (1)     There is an error with the Mean Dynamic Topography height for one or     more records     Mean Dynamic Topography (1)     Mean Sea Surface (1), Mean Dynamic     Topography (2) 20190707T012403_20190707T012635_C001     Mean Dynamic Topography (1)     There is an error with the MSS height (solution 1) and the Mean Dynamic     S     OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_C001     Mean Sea Surface (1), Mean Dynamic     There is an error with the MSS height (solution 1) and the Mean Dynamic     There is an error with the MSS height (solution 1) and the Mean Dynamic     There is an error with the MSS height (solution 1) and the Mean Dynamic     There is an error with the MSS height (solution 1) and the Mean Dynamic			
A Mean Dynamic Topography: The error value is currently set for products over land and sea ice, but this is to be expected.     Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.     Number of products with errors:     3      Product     Test Failed     Description     CS_OFFL_SIR_IOPN_2_20190707T003120_20190707T003710_C001     Mean Sea Surface (1), Mean Dynamic     Tide (GOT)     Mean Dynamic Topography (1)     There is an error with the MSS height (solution 1), the Mean Dynamic     GOT) for one or more records     CS_OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_C001     Mean Dynamic Topography (1)     There is an error with the Mean Dynamic Topography height for one or     more records     Mean Dynamic Topography (1)     There is an error with the MSS height (solution 1) and the Mean Dynamic     Topography (1)	> Sea State Bias & Sea State Bias PLRM: The error value is currently set for	products over sea ice, but this is to be expected	ed.
Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.     Number of products with errors:     3      Product     Test Failed     Description     CS_OFFL_SIR_IOPN_2_20190707T003120_20190707T003710_C001     Mean Sea Surface (1), Mean Dynamic     Tide (GOT)     Mean Dynamic Topography (1), Total Geocentric Ocean     Tide (GOT)     Mean Dynamic Topography (1)     There is an error with the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean     Tide (GOT)     Mean Dynamic Topography (1)     There is an error with the Mean Dynamic Topography height for one or     more records     There is an error with the Mean Dynamic Topography height for one or     more records     There is an error with the MSS height (solution 1) and the Mean Dynamic     There is an error with the MSS height (solution 1) and the Mean Dynamic     There is an error with the MSS height (solution 1) and the Mean Dynamic     There is an error with the MSS height (solution 1) and the Mean Dynamic	> Mean Sea Surface: The error value is currently set for products over land an	nd sea ice, but this is to be expected.	
Number of products with errors:     3       Product     Test Failed     Description       CS_OFFL_SIR_IOPN_2_20190707T003120_20190707T003710_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 GOT) for one or more records       CS_OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_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_20190707T012403_20190707T012635_C001     Mean Dynamic Topography (1)     There is an error with the Mean Dynamic Topography height for one or more records	> Mean Dynamic Topography: The error value is currently set for products o	ver land and sea ice, but this is to be expected.	
Product     Test Failed     Description       CS_OFFL_SIR_IOPN_2_20190707T003120_20190707T003710_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 GOT) for one or more records       CS_OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_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_20190707T012403_20190707T012635_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_20190707T012403_20190707T012635_C001     Mean Sea Surface (1), Mean Dynamic     There is an error with the MSS height (solution 1) and the Mean Dynamic	> Altimetric Wind Speed Error: The error value is currently set for products of	over land and sea ice, but this is to be expected	
Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1), the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20190707T003120_20190707T003710_C001       Mean Sea Surface (1), Mean Dynamic       Topography (solution 1), the Total Geocentric Ocean         CS_OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_C001       Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1), the Mean Dynamic GOT) for one or more records         CS_OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_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_20190707T012403_20190707T012635_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the Mean Dynamic Topography height for one or more records	Number of products with errors: 3		
CS_OFFL_SIR_IOPN_2_201907077003120_201907077003710_C001       Topography (1), Total Geocentric Ocean       Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records         CS_OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_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_20190707T012403_20190707T012635_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_20190707T012403_C010707T012635_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic	Product		•
CS_OFFL_SIR_IOPR_2_201907071012405_201907071012605_C001 Intern Dynamic Topography (1) more records	CS_OFFL_SIR_IOPN_2_20190707T003120_20190707T003710_C001	Topography (1), Total Geocentric Ocean	Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:
	CS_OFFL_SIR_IOPN_2_20190707T012403_20190707T012635_C001	Mean Dynamic Topography (1)	
	CS_OFFL_SIR_IOPR_2_20190707T002556_20190707T003120_C001		

# 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.

0

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.

5

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20190706T234803_20190707T000318_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_20190707T004613_20190707T011233_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_20190707T011841_20190707T012403_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_20190707T012805_20190707T015152_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_20190707T003711_20190707T003936_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.

5

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20190707T003120_20190707T003710_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_20190707T012403_20190707T012635_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_20190707T000600_20190707T000954_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_20190707T002556_20190707T003120_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_20190707T011234_20190707T011414_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

### L2 Quality Flags (1 Hz & 1Hz PLRM)

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

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

Number of products with errors:

### 5.8 L2 Ocean Retracking Quality Check

### L2 Retracking Flags (20Hz)

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

Ocean Retracking Quality Flag: This flag is currently set for products 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: 3		
Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20190707T004613_20190707T011233_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190707T012805_20190707T015152_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190707T000600_20190707T000954_C001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag has been set for one or more records.

### 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.

### 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 Correction, 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.

3

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220190706T234009_20190707T002944_C002		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220190707T002944_20190707T011922_C001	Topography (1), Total Geocentric Ocean	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_IOP_2_20190707T011922_20190707T020857_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records

### 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.

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.

### 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:

### P2P Quality Flags (1 Hz & 1Hz PLRM)

Since the P2P Quality Flags are copied directly from	n the L2 Quality Flags, please see Section 5.6 for the full list of products affected.
Number of products with errors:	3

Number of products with errors:

### 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.

3

3

Number of products with errors:

### 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.

Number of products with errors: