Date Range: April 1 to May 1

macros/cis/CIS\_DB\_Update.py --date 'April 1, 2022' 'May 1, 2022' |&tee AprCIS.txt

Initial note: there were a lot of groups of cis runs taken on the same date because of the testing with the msising pulses. I think I should only pick one out of each of these groups.

Run list: **416626 416935 416936 416938 416941 416943 416947 416960 416965 416970 416973 417164 417535 417549 417562 417563 417564 417566 417567 417568 417569 417572 417575 417576 417578 417882 418169 418412 418778 418994 419504**

With comma: **416626, 416935, 416936, 416938, 416941, 416943, 416947, 416960, 416965, 416970, 416973, 417164, 417535, 417549, 417562, 417563, 417564, 417566, 417567, 417568, 417569, 417572, 417575, 417576, 417578, 417882, 418169, 418412, 418778, 418994, 419504**

run [416626, 'CIS', '2022-04-04 16:43:10,2022-04-04 16:44:50']

run [416935, 'CIS', '2022-04-06 14:35:40,2022-04-06 14:36:37']

run [416936, 'CIS', '2022-04-06 14:40:32,2022-04-06 14:41:31']

run [416938, 'CIS', '2022-04-06 14:44:51,2022-04-06 14:45:51']

run [416941, 'CIS', '2022-04-06 14:49:19,2022-04-06 14:50:19']

run [416943, 'CIS', '2022-04-06 14:53:57,2022-04-06 14:54:57']

run [416947, 'CIS', '2022-04-06 14:59:34,2022-04-06 15:00:34']

run [416960, 'CIS', '2022-04-06 15:30:32,2022-04-06 15:31:32']

run [416965, 'CIS', '2022-04-06 15:35:37,2022-04-06 15:36:37']

run [416970, 'CIS', '2022-04-06 15:47:56,2022-04-06 15:48:56']

run [416973, 'CIS', '2022-04-06 15:52:15,2022-04-06 15:53:14']

run [417164, 'CIS', '2022-04-07 12:48:28,2022-04-07 12:49:31']

run [417535, 'CIS', '2022-04-11 10:39:09,2022-04-11 10:40:11']

run [417549, 'CIS', '2022-04-11 11:02:40,2022-04-11 11:03:42']

run [417562, 'CIS', '2022-04-11 11:13:42,2022-04-11 11:14:40']

run [417563, 'CIS', '2022-04-11 11:21:22,2022-04-11 11:22:24']

run [417564, 'CIS', '2022-04-11 11:26:23,2022-04-11 11:27:25']

run [417566, 'CIS', '2022-04-11 11:31:29,2022-04-11 11:32:31']

run [417567, 'CIS', '2022-04-11 11:37:08,2022-04-11 11:38:10']

run [417568, 'CIS', '2022-04-11 11:41:40,2022-04-11 11:42:42']

run [417569, 'CIS', '2022-04-11 11:46:07,2022-04-11 11:47:09']

run [417572, 'CIS', '2022-04-11 11:50:35,2022-04-11 11:51:38']

run [417575, 'CIS', '2022-04-11 11:56:12,2022-04-11 11:57:14']

run [417576, 'CIS', '2022-04-11 12:00:36,2022-04-11 12:01:39']

run [417578, 'CIS', '2022-04-11 12:05:09,2022-04-11 12:06:12']

run [417882, 'CIS', '2022-04-14 09:34:44,2022-04-14 09:35:49']

run [418169, 'CIS', '2022-04-19 09:30:02,2022-04-19 09:31:04']

run [418412, 'CIS', '2022-04-21 10:23:06,2022-04-21 10:24:08']

run [418778, 'CIS', '2022-04-25 09:15:30,2022-04-25 09:16:32']

run [418994, 'CIS', '2022-04-26 09:52:12,2022-04-26 09:53:15']

run [419504, 'CIS', '2022-04-28 13:37:52,2022-04-28 13:38:54']

**416626 416941 417164 417535 417882 418169 418412 418778 418994 419504**

Am getting divide by 0 error. Going to try filtering the runs first and then try running it again (...maybe there are just too many runs?)

BAD AMPQ:

416935 LBA HG

416936 LBA LG

416938 LBA LG

416943 LBA HG

416943 LBA LG

416947 LBA HG

416960 LBA HG

416965 LBA LG

416970 LBA HG

416973 LBA LG

417549 LBA LG

BAD TIMING:

None ;) all good!

New run list:

**416626 416941 417164 417535 417882 418169 418412 418778 418994 419504**

macros/cis/CIS\_DB\_Update.py --date '--28 days' --ldate 416626 416941 417164 417535 417882 418169 418412 418778 418994 419504 |&tee AprCIS.txt

STILL getting divide by 0 error:

Running MoreInfo - Adding Edge, Next to Edge, No Response, and Outlier information to event.data[moreInfo]

Edge Samples 41

Next To Edge Samples 32

No Response 103

Outliers 295

<string>:108: SyntaxWarning: 'str' object is not callable; perhaps you missed a comma?

Running SetLowCISThreshold - Calculate a threshold for deciding low CIS constants, using distribution of current databases values

Traceback (most recent call last):

File "/afs/cern.ch/user/k/khughes/Tucs/macros/cis/CIS\_DB\_Update.py", line 176, in <module>

Go([

File "./src/go.py", line 62, in \_\_init\_\_

self.detector = worker.HandleDetector(self.detector)

File "./src/GenericWorker.py", line 49, in HandleDetector

self.ProcessRegion(region)

File "<string>", line 127, in ProcessRegion

ZeroDivisionError: float division by zero

I believe it is because there is a \ at the end of line 46 in src/GenericWorker.py so I will try deleting that…

Currently is:

self.ProcessStart()\

for region in detector.RegionGenerator(type):

self.ProcessRegion(region)

self.ProcessStop()

Did not change :(

I should explicitly check that there is a region before this happens?

The region in processRegion(region) is a string that goes TILECAL\_part\_mMODULE\_cCHANNEL\_gain

So i just check that the string is not length 0 before hand and then do ProcessRegion I think

Did not work again so I have fixed it with a simple try/except but this feels like a bit of a temporary solution

I got the error for two channels:

EBC\_m34\_c39\_lowgain

EBC\_m34\_c40\_lowgain

Maybe this is because CIS constant gets set to 0 because of Sasha’s new update in some scenarios? Ask in meeting. (and check if cis constants are bad for these channels!)

macros/cis/Public\_Super\_Macro.py --gcals --date --listdate 416626 416941 417164 417535 417882 418169 418412 418778 418994 419504 --datelabel 'April 1 - May 1, 2022' --mean --lowmem --rmsplots --flagplots

macros/cis/Public\_Super\_Macro.py --history -0.5 0.5 --date ‘April 1, 2022' 'May 1, 2022' --ndate 'April 1, 2021' 'May 1, 2021' --datelabel 'Apr. 2021 vs 2022'

List of channels that have been half gain switching:

This update (April):

LBC\_m19\_c22\_lowgain

LBC\_m41\_c25\_highgain

LBC\_m47\_c35\_lowgain

March update:

EBC\_m43\_ch36-41

EBC\_m34\_ch39-41\_lowgain

Feb Update:

LBC\_m19\_c22\_lowgain

LBC\_m47\_c35\_lowgain

LBA\_m64\_c29\_highgain

January update:

LBC\_m19\_c22\_lowgain

LBC\_m47\_c35\_lowgain

LBA\_m64\_c29\_highgain -> was half gain at end of november

Didn’t track beyond this

I think I should track these with studyflag from beginning of year to today.

macros/cis/StudyFlag.py --date 'January 1, 2022' 'May 1, 2022' --region 'LBC\_m19\_c22\_lowgain' 'LBC\_m47\_c35\_lowgain' 'LBA\_m64\_c29\_highgain' 'LBC\_m41\_c25\_highgain' --output GainSwitch --qflag 'all' --timestab --printopt 'Print\_All'