

FCAL monitoring IV:

Batch 1 (ver08)

timing shift in fcal hits 2 before incl. run 71533 (persists but un-problematic)

Batch 2 (ver08)

run 71598

FCAL Hits 1: rel more low-energy background,

FCAL Hits 2: time distribution sharper (persists but un-problematic)

run 71672, run 71692

FCAL Hits 1: rel more low-energy background

FCAL Hits 2: time distribution sharper (persists but un-problematic)

Recon FCAL Matching: track distance vs theta island less pronounced ... (persists but subtle, viz ok?)

Batch 3 and 4 (ver08): no FCAL comments

Batch 5 (ver12): no FCAL comments

Batch 6: see below ... mostly issues persist

Batch 7-8: to be done (very soon!)

FCAL monitoring RunPeriod-2019-11 ver12 - Batch 6 (runs 72068 - 72163)

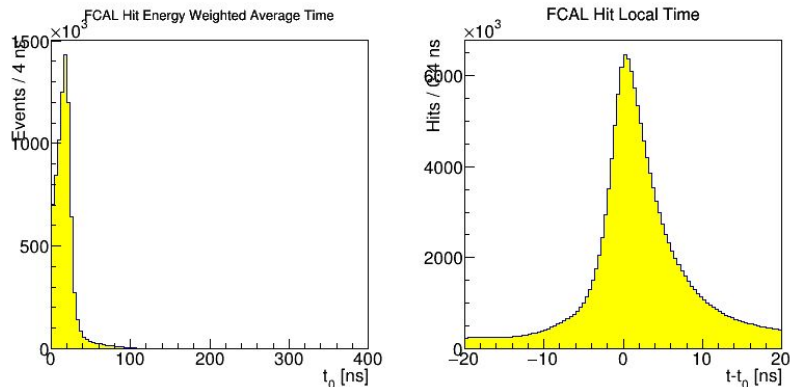
ver16

	72068 (used as ref)	72094	72099 (AMO)	72104*	72113*	72123* (AMO)	72124 (AMO)	72125 - 72162	72163*
FCAL Local Hit Time RMS: wider for outer 'rings'		ver12 ver16 ?	ver12 ver16				ver12		
FCAL Local Hit Time RMS: structure upper left quadrant edge				ver12 ver16	ver12 ver16	ver12			ver12
FCAL Hit Average Energy: structure upper left quadrant edge				ver12 ver16	ver12 ver16	ver12			ver12
FCAL Neutral Shower dt vs Energy: vertical bands				ver12	ver12				
FCAL Neutral Shower dt vs Energy: horizontal bands						ver12 ver16		ver12 ver16	ver12

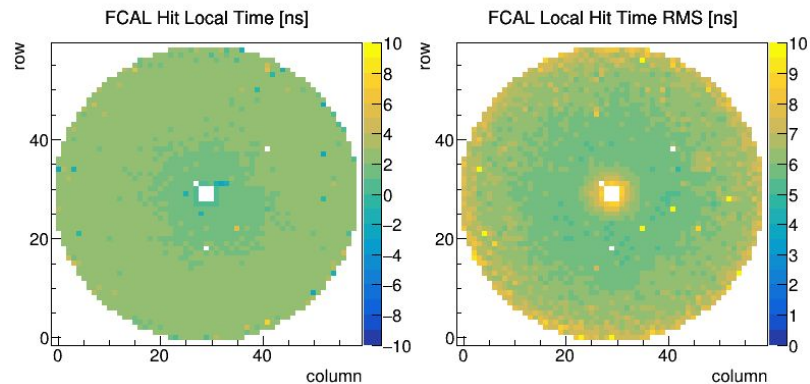
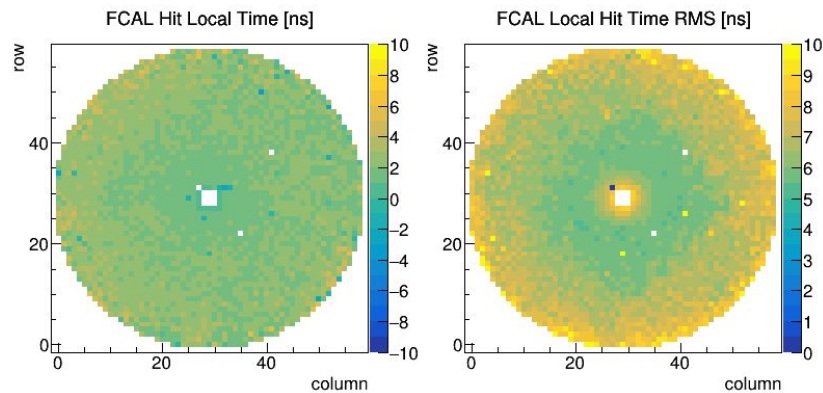
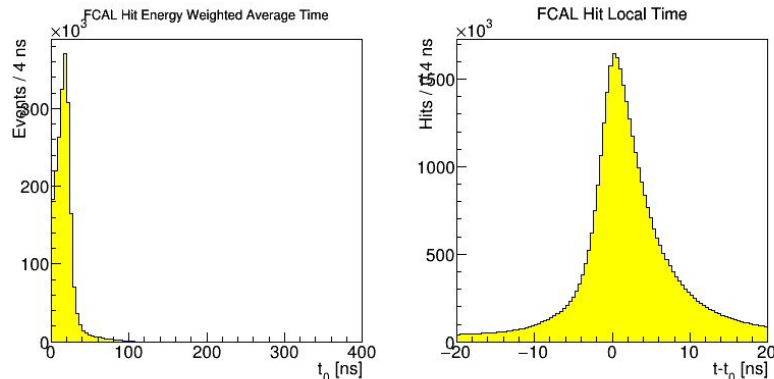
*overall quality: no

FCAL Local Hit Time RMS: wider for outer 'rings': solved in ver16, or stats, or different part of the run?

ver12 run 72094



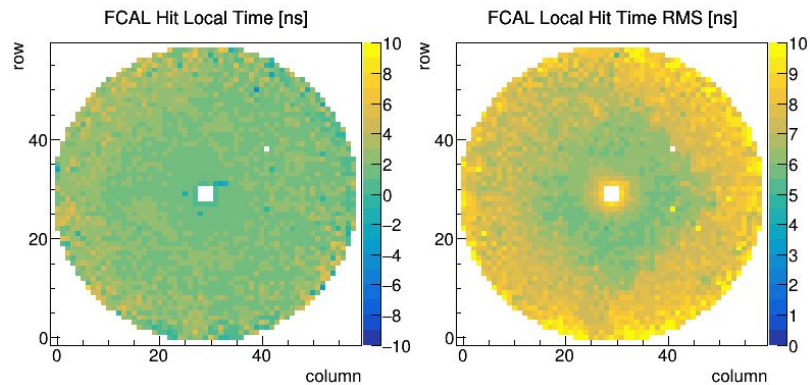
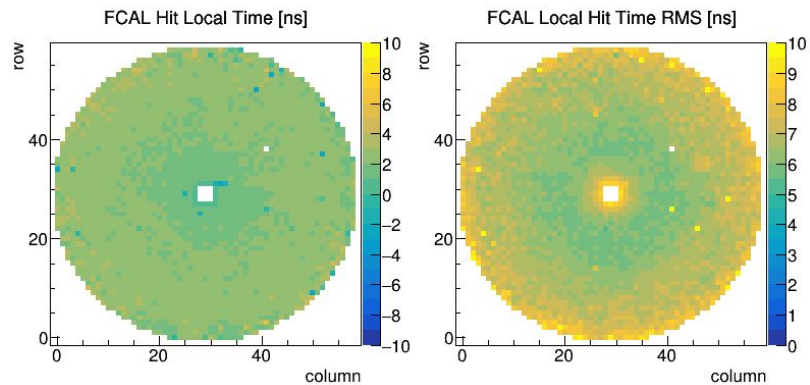
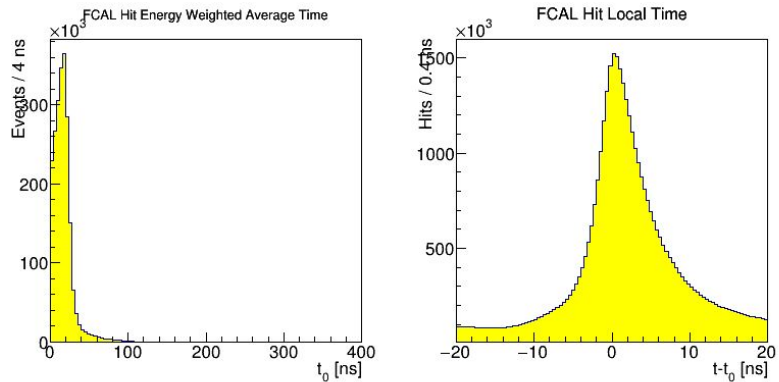
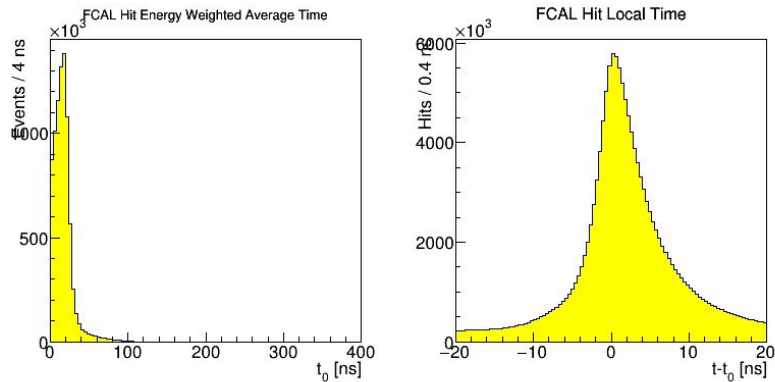
ver16 run 72094



FCAL Local Hit Time RMS: wider for outer 'rings'

ver12 run 72099

ver16 run 72099



Owl shift summary 03/07/2020

Lognumber [3798927](#). Submitted by [diersch](#) on [Sat_03/07/2020 - 00:11](#).

Last updated on Sat, 03/07/2020 - 08:00

0:00 - Daniel takes over the shift from Sebastian, currently running 350nA @ JD70-105 47um 0/90 PARA

1:14 - Kevin noticed that counts in the upstream beam profiler are missing, please see entry:

<https://logbooks.ilab.org/entry/3798964>

1:21 - Restarted the troubling beam profiler hv channel (hvx 1) --> Problem seems to be fixed, see:

<https://logbooks.ilab.org/entry/3798968>

1:33 - Stopped run 72104, switching rotation from PARA to PERP for next run

1:39 - Started run 72105, had to nudge coherent peak a bit -> screenshots of coherent peak edge are attached

3:45 - Stopped run 72105, start next run with same configuration

3:55 - Antonio arrives to replace Kevin as a worker

5:47 - Stopped run 72106, switch radiator to: JD70-105 47um 45/135 PARA

6:03 - Start run 72107, lost few minutes due to adjustment of coherent peak edge (+ beam was gone a few times) -> see attachment

7:42 - Mark arrives, to take over the day shift

=====
Collected data:

Run | Radiator | Start | End | #Events

72104 | JD70-105 47um 0/90 PARA | 23:23 | 1:35 | 447M

72105 | JD70-105 47um 0/90 PERP | 1:39 | 3:46 | 391M

72106 | JD70-105 47um 0/90 PERP | 3:47 | 5:47 | 430M

72107 | JD70-105 47um 45/135 PARA | 6:04 | |

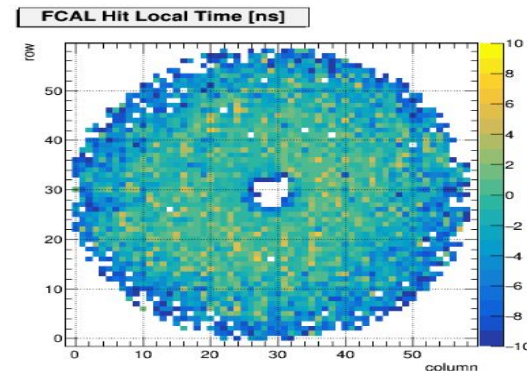
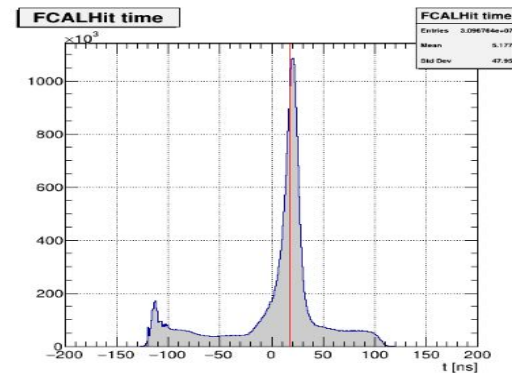
logbook run 72104

last check on spectra:

[Hall-D Monitoring Plots Run 72104](#)

Hall-D Monitoring Plots for Sat Mar 7

00:23:57 2020 33/33 pages generated



"structure upper left quadrant edge"
problem is seen in
<-- offline spectra;

would be hard to see
from this online
monitoring spectrum -->

check on history within run; analysis of rawdata subruns w/ FCAL_online plugin

zooming in on point in time of last good sub-run 072104_239

David Lawrence wrote:

... the HOSS DB time will typically be ~2-3 minutes after the first event of the file actually occurred. ...

```
+-----+-----+-----+
| created   | run | file |
```

...

2020-03-07 01:10:09	72104	238
2020-03-07 01:09:53	72104	239
2020-03-07 01:10:25	72104	240

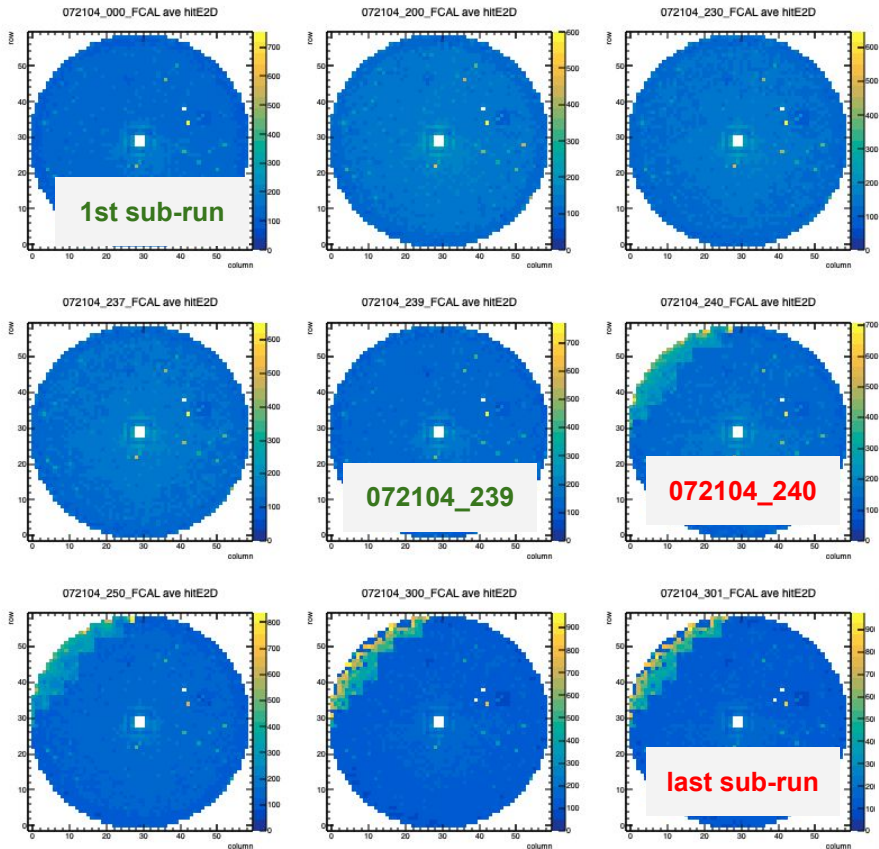
logbook:

1:14 - noticed that counts in the upstream beam profiler are missing

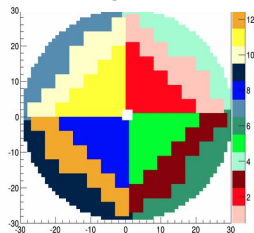
1:21 - restarted the beam profiler hv channel (hvx 1)

.. doesnt look related?

pending: looking with Mark on near-in-time issues with crates (EPICS archive)

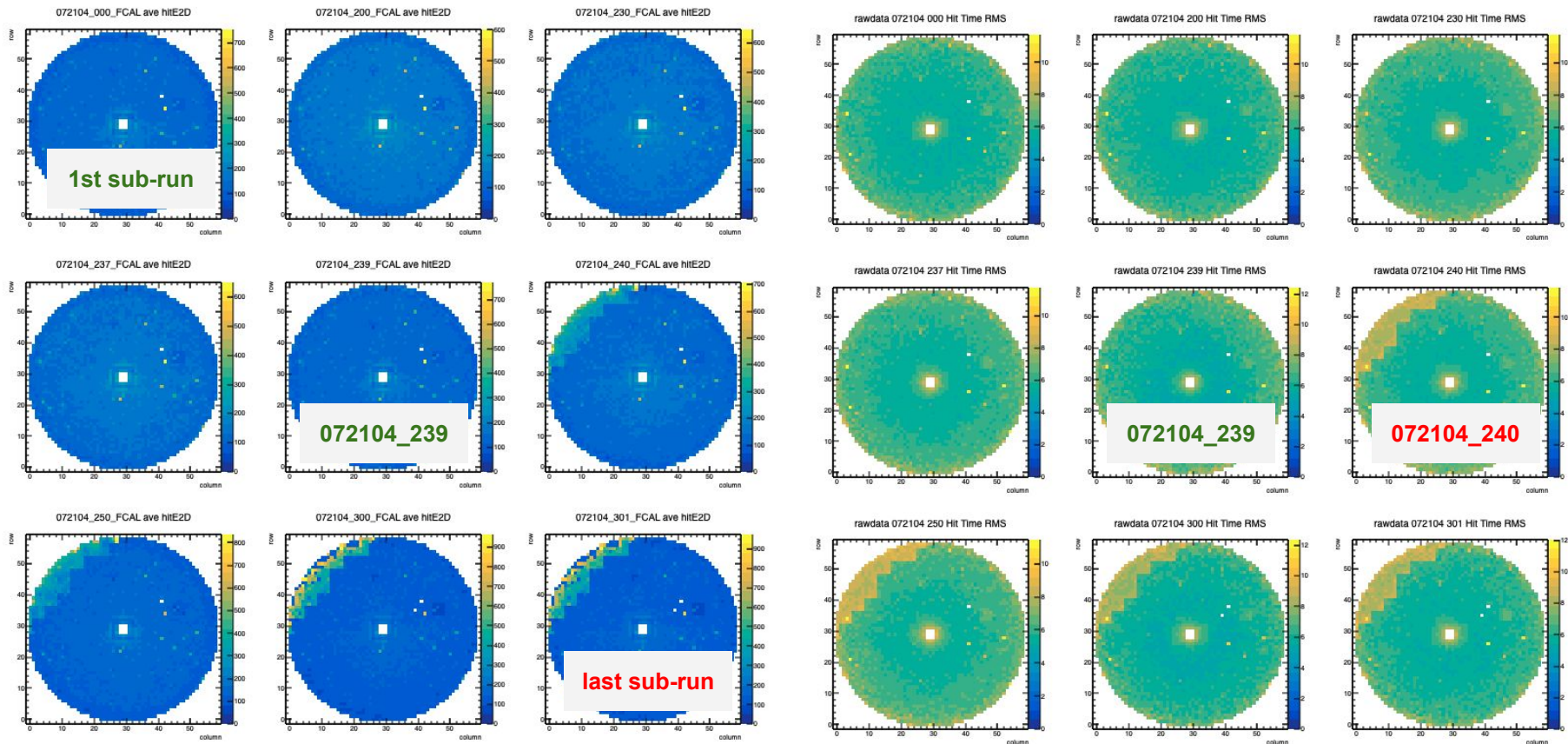


DAQ crates looking upstream



072104_239 is last good sub-run. Throw out entire run? Mark these channels as bad for entire run?

check on history within run; analysis of rawdata subruns w/ FCAL_online plugin



072104_239 is last good sub-run. Throw out entire run? Mark these channels as bad for entire run?

logbook run 72113 "structure upper left quadrant edge ..."

Swing shift summary

Lognumber [3799351](#). Submitted by [scole](#) on [Sat. 03/07/2020 - 16:07](#).

Last updated on Sun, 03/08/2020 - 00:03

16:00 - Assumed leader role from Mark. Continuing 0/90 PARA run.

17:05 - Stopping run 072112.

17:08 - **Starting run 072113.**

18:30 - We have had very stable running during shift up to this point. The accelerator has a cavity issue. Hope this does not result in long downtime.

18:38 - **Stopping run 072113 while the accelerator is brought back up to stable running conditions.** They are currently tuning hall C, the priority hall. We will do another 30 minutes in this orientation before switching to PERP. -> <https://logbooks.jlab.org/entry/3799451>

.....
19:35 - **Beam position looks to be improved.**

19:50 - Accelerator having issue keeping beam up without trips. ->

<https://logbooks.jlab.org/entry/3799501>

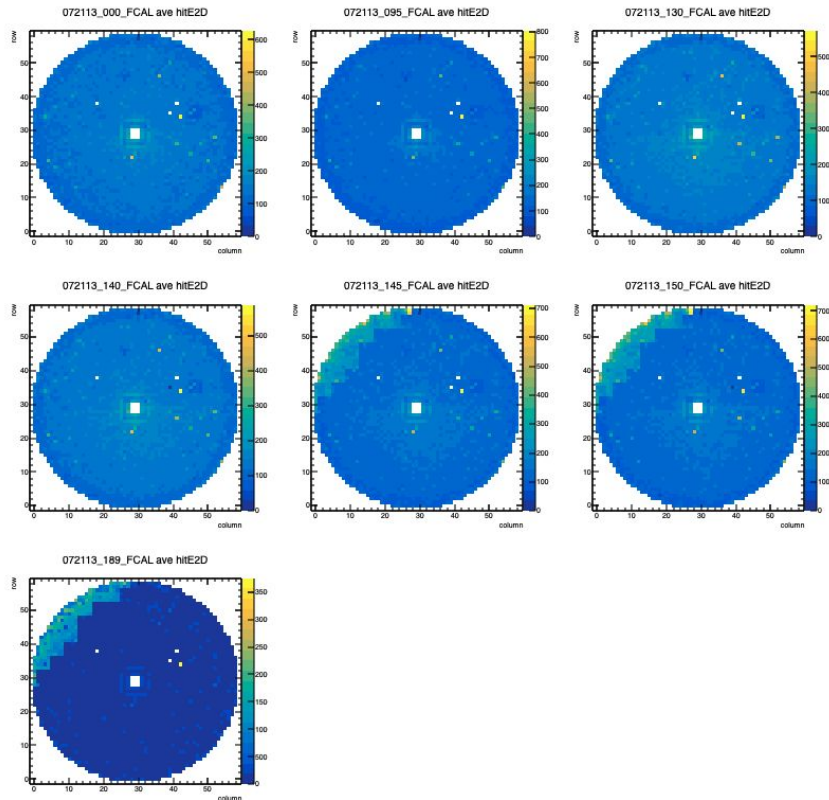
19:55 - Kevin arrived to assume worker role from Bill.

19:56 - Stopping run 072114. Switching to PERP. Waiting for stable beam to start next run.

20:00 - No beam. The accelerator is having ongoing issues.

20:07 - Kevin noticed the **DAQ event count is increasing when the DAQ has not been started.** ?????? -> <https://logbooks.jlab.org/entry/3799518>

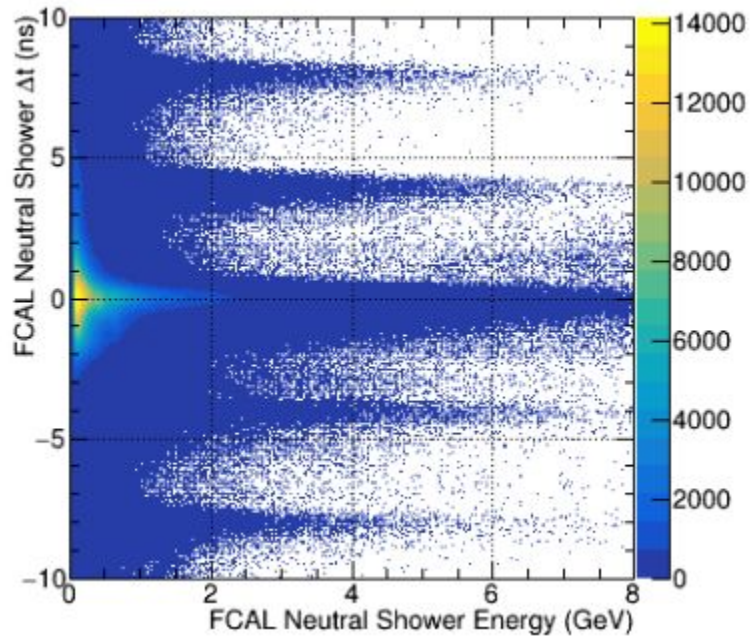
.....



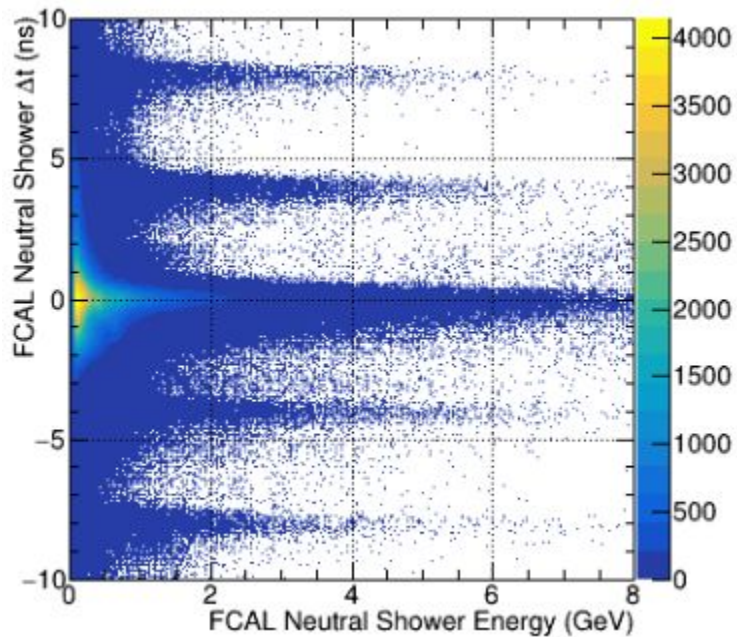
to be continued ...

FCAL Neutral Shower dt vs Energy: horizontal bands

ver12 run 72123

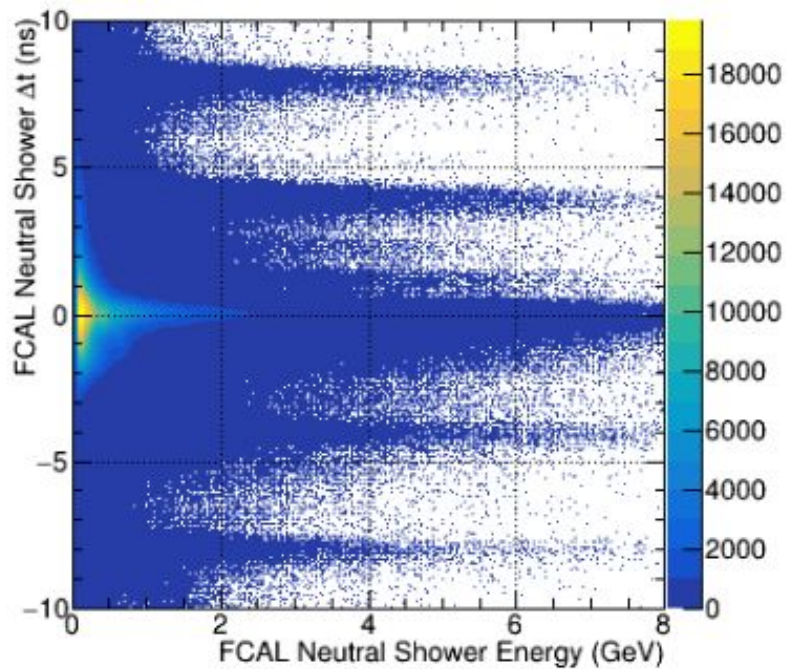


ver16 run 72123



FCAL Neutral Shower dt vs Energy: horizontal bands

ver12 run 72162



ver16 run 72162

