

Batch 6 and 8 (ver16):

FCAL Local Hit Time RMS and Hit Average Energy: structure upper left quadrant edge
summary of information below.

Batch 9 and 10 (ver18):

batch 9: runs 72645-72760

batch10: runs 72761-78857

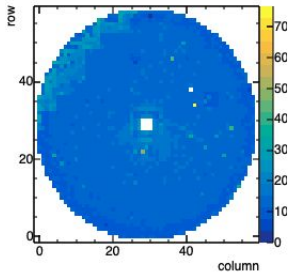
PlotBrowser, looking only at plots 'FCAL Hits1' and 'FCAL Hits2': no structures seen.

**FCAL bad channel monitoring
started**

"structure upper left quadrant edge ... "

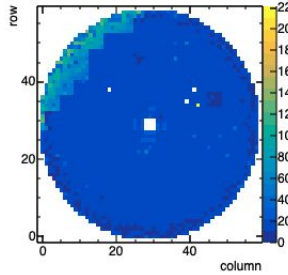
072104

ver16_072104 FCAL Hit Total Energy



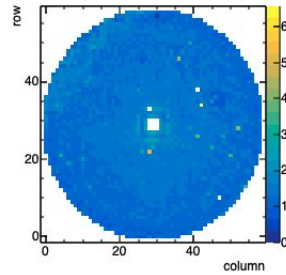
072113

ver16_072113 FCAL Hit Total Energy



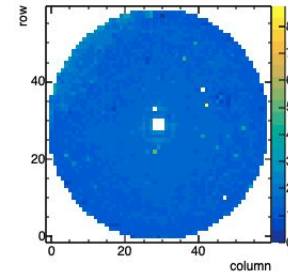
072163

ver16_072163 FCAL Hit Total Energy



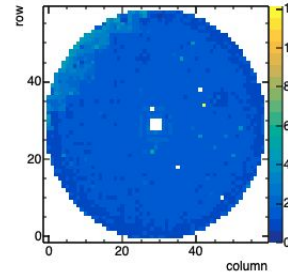
072174

ver16_072174 FCAL Hit Total Energy



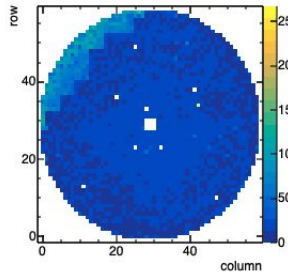
072187

ver16_072187 FCAL Hit Total Energy

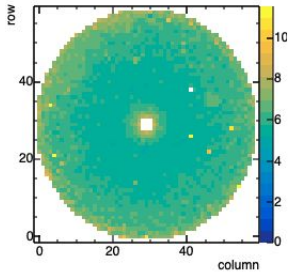


072286

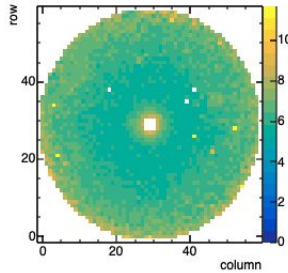
ver16_072286 FCAL Hit Total Energy



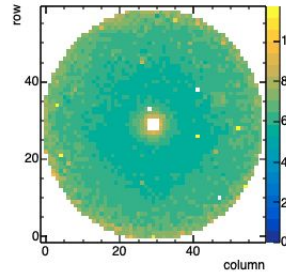
ver16_072104 FCAL Local Time Hit RMS (ns)



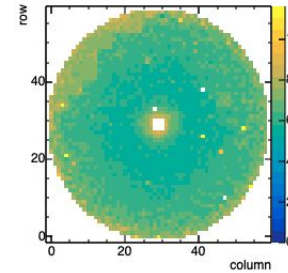
ver16_072113 FCAL Local Time Hit RMS (ns)



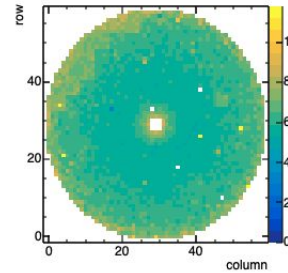
ver16_072163 FCAL Local Time Hit RMS (ns)



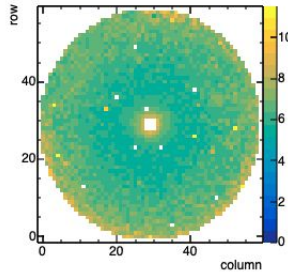
ver16_072174 FCAL Local Time Hit RMS (ns)



ver16_072187 FCAL Local Time Hit RMS (ns)



ver16_072286 FCAL Local Time Hit RMS (ns)



these are the runs that show the structures

the plots are made from /work/hald/data_monitoring/RunPeriod-2019-11/mon_ver16/rootfiles/

"structure upper left quadrant edge ... " **errors while analyzing subruns with FCAL_online plugin**

072104	JANA ERROR>>Unknown module type (14) iptr=0x0x7f050812ef08
072113	JANA ERROR>> FADC250 unknown data type (11) (0xd8000004)
072163	JANA ERROR>> FADC250 unknown data type (11) (0xd8000004)
072174	JANA ERROR>> FADC250 unknown data type (11) (0xd8000004)
072187	
072286	

JANA ERROR>>**FADC250 unknown data type (11) (0xd8000004)**

[Trigger Commissioning Meetings](#)

[January 11, 2016](#)

[Readout errors in data stream](#)

Use data type 11 to report readout errors (fadc250, fadc125, F1TDC)

Block Ready Timeout

0xD8000001 Type definition

(32 bits) fadc slot mask

(32 bits) fadc ready for readout mask

.....

[FADC250 User's Manual - Jefferson Lab \(incl. IEEE article\)](#) (documented by **Richard Jones**)

this is a short summary

more information for selected subruns: google sheet (see agenda, **to be completed**),

detailed table and plots

FCAL bad channel monitoring

look at Fall 2018, ie RunPeriod 2018-08

- https://halldweb.jlab.org/wiki/index.php/RunPeriod-2018-08_Validation
 - Starting at 50697
 - **Low energy run** 51384-51457
 - **Intensity scan** 51643-51682, 51688-51721
 - Updated to 51768
- monitoring spreadsheet (ver10)
Average energy showing some strange features !!!???
 - 50712 - 50728
 - 50733 - 50746
 - 50751 - 50758

FCAL bad channel monitoring

from Chandra, fcalbadchannels05aug2020presentation.pdf:

- LEDs are used to check the channel status.
- We have 3 LED colors with different voltages.
- We analyzed FCAL LED events for every run separately.

/w/halld-scifs17exp/home/chandra/.../JEventProcessor_fcalbadchannelschandra.cc, .h files

https://github.com/JeffersonLab/hd_utilities/tree/master/fcalchannelfits

- **ADCinteVsRunNumbers.C.** is to calculate normalized ADC integral for each the run number
- **BeRunsOCT21.C.** Is to calculate normalized ADC integral, # ADC peaks for each LED color and for different targets. Randomly I selected the FCAL regions (3 color rings in slides 10 and 11, you can select your own regions).

- started first analysis, hd_rawdata_050697_000.evio

That's how far this is.