

Production Run Monitoring Tasks

- Ensure that run conditions are consistent with instructions on white board.
- Monitor beam current and position strip-chart (see Fig. 1 for typical view).
- Stop run and start a new run after each hour of production running.
- Be sure that the LMS phase is 1 during the start of a run (can be seen on camera:hallbcam09.jlab.org, see Fig. 2 for example). LMS phase number will automatically change to 2 after the first 20000 events. Record the LMS phase once during the physics events (i.e. events > 30000). After the first 20000 events the LMS phase should be an even number, if not record it and change it manually to an even number.
- Ensure that the rates are ~ 1.6 kHz for 10 nA beam and the livetime is $> 65\%$ (see Fig. 3 for location of rates and livetime on the run control GUI).
- Monitor the occupancy of HyCal (see Fig. 4 for a typical occupancy).
- Monitor image of HyCal signal on scope (see Fig. 5 for typical view).
- Monitor GEM occupancy and histograms (see Fig. 6 for typical view).
- Monitor vacuum box pressure and ensure that it is $< 5.0E-4$ Torr (see Fig. 7 for location of readout). If pressure goes higher than the limit, stop run, reduce hydrogen flow rate to 0 and wait for pressure to drop below $5.0E-6$ Torr and then restore the gas flow to 600 sccm and start a run.
- Monitor HyCal temperature and chiller temperature (see Fig. 8 for location of temperature monitor)
- Update the run spread-sheet for each run and also make an entry in the HBLOG and PRADLOG
- Stop run if there are any problems with the items listed above.

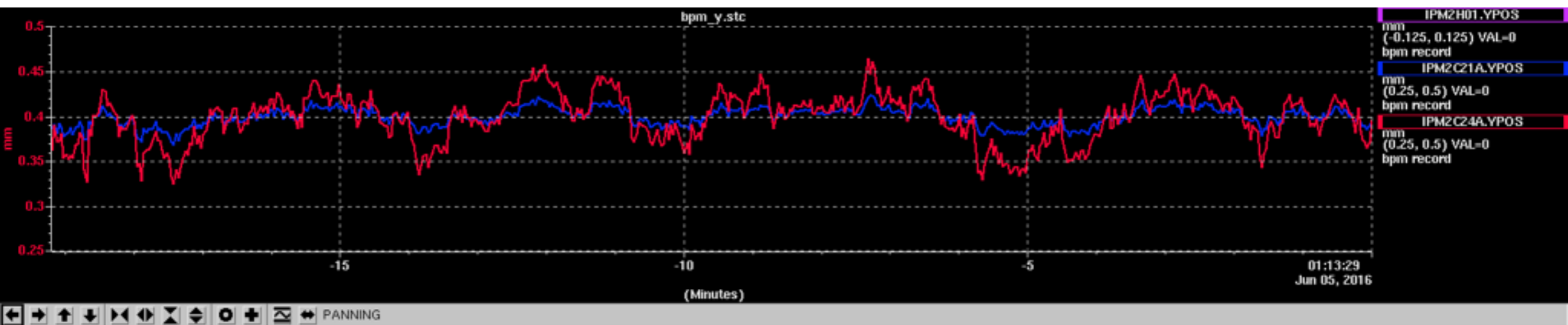
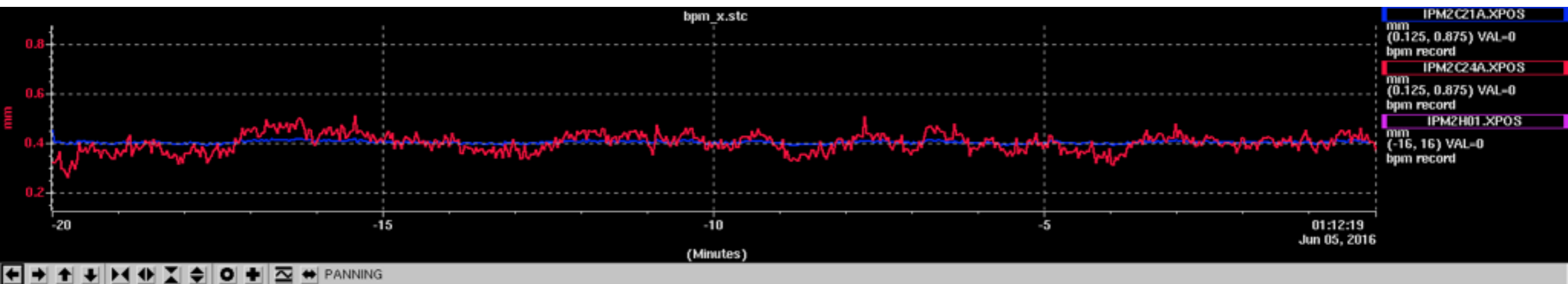
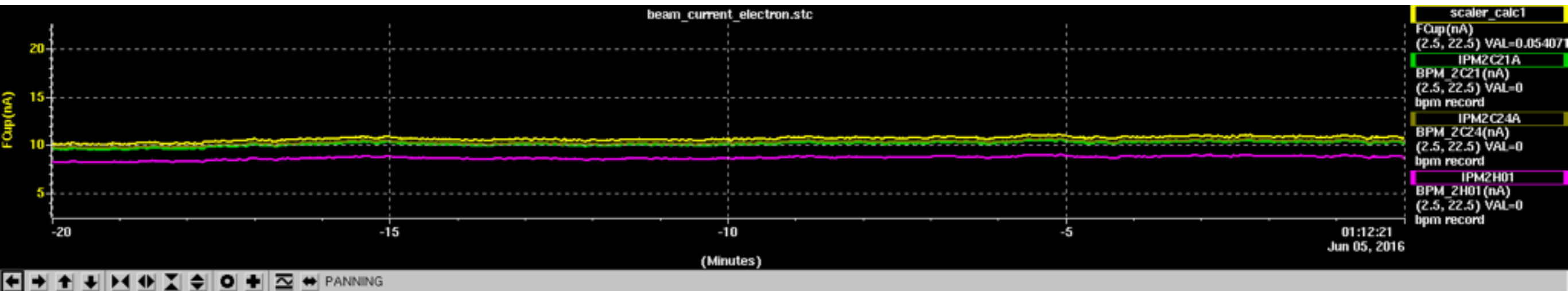


Fig. 1

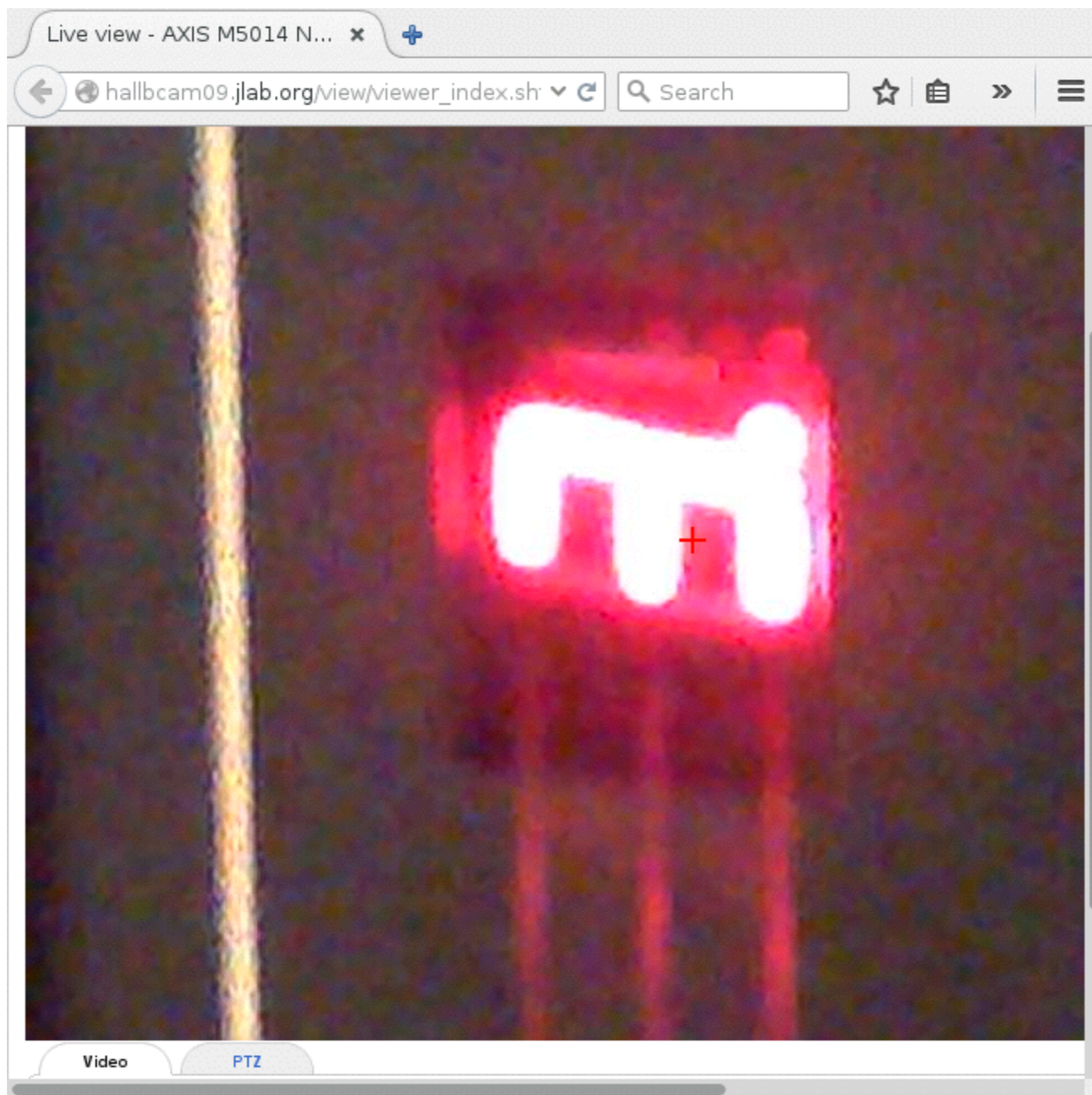


Fig. 2

File Preference

Run control Buttons

Control: Cancel, Reset, Disconnect

Transition: Prestart, Abort, Start Run

Static parameters

Database	Session	Configuration	rcServer
prad	clasprad	PRAD	clonpc14.jlab.org

Session status

Data file name: /data/prad/prad

Config file name: /usr/cls12/release/1.3.0/parms/trigger/prad.cnf

Run status

Run number	Run status
1075	downloaded
Start time	End time
Jun 5 00:55:12	Jun 5 01:33:44
Limits	
Events	KBytes
0	0

Events/Sec graph: 2 Sec. update

Run progress

Events this run: 3363911

Read From: ER1

Rates	Events/S	Rate (KB/S)
Integrated	1472.1112	315.5052093882.3754
Differential	102.0000	882.5040

INFO : srs1 go...
 INFO : prad3 go...
 INFO : prad2 go...
 INFO : prad1 go...
 INFO : ETT2 go...
 INFO : pgen go...
 INFO : transition Go succeeded !
 INFO : pgen end...
 INFO : pgen sys 0, mask 21
 INFO : ETT2 end...
 INFO : srs2 end...
 INFO : srs1 end...
 INFO : prad3 end...
 INFO : prad2 end...
 INFO : prad1 end...
 INFO : EB1 end...
 INFO : ER1 end...
 INFO : ET4 end...
 INFO : ET1 end...
 INFO : transition End succeeded !

Help Statistics Options codaedit dbedit

File Preference

procs: rocs, rocs1, rocs2

pgem on pgem

```

ndsc2: srsq5
dsc2: jj=0 slot=9
dsc2: trigger counts= 00014530 00006582
DAQ live time: 98.083971%
SYNC: livetime
===== Livetime= 98 percent
SYNC: livetime - done
SYNC: make sure all board buffers are empty - done
SYNC: make sure all board buffers are empty - done
CODAtcpServer: start work thread
before: socket=... port=38975
wait: coda request >go< in progress
  
```

prad1 on prad1

```

bb_cleanup 2
roc_network ***** 2
LINK_close: socket #11 connection closed
roc_network ***** 3
WRITE THREAD EXIT
call: 'prad1 close_links'
rocCloseLink reached
bb_cleanup 0: 0x080becb0
bb_cleanup 1: 0x08c75ed8
bb_cleanup 2
PROC THREAD EXIT
  
```

prad2 on prad2

```

bb_cleanup 2
roc_network ***** 2
LINK_close: socket #11 connection closed
roc_network ***** 3
WRITE THREAD EXIT
call: 'prad2 close_links'
rocCloseLink reached
bb_cleanup 0: 0x080becb0
bb_cleanup 1: 0x08e55ed8
bb_cleanup 2
PROC THREAD EXIT
  
```

prad3 on prad3

```

bb_cleanup 2
roc_network ***** 2
LINK_close: socket #11 connection closed
roc_network ***** 3
WRITE THREAD EXIT
call: 'prad3 close_links'
rocCloseLink reached
bb_cleanup 0: 0x080becb0
bb_cleanup 1: 0x087baed8
bb_cleanup 2
PROC THREAD EXIT
  
```

srs1 on clondaq6

```

WARN: do nothing to cancel pthread 0, probably exited already: 0x23fff700 0
WARN: do nothing to cancel pthread 1, probably exited already: 0x28e10700 0
WARN: do nothing to cancel pthread 2, probably exited already: 0x29611700 0
WARN: do nothing to cancel pthread 3, probably exited already: 0x2ae14700 0
WARN: do nothing to cancel pthread 4, probably exited already: 0x2ae613700 0
WARN: do nothing to cancel pthread 5, probably exited already: 0x29e12700 0
WARN: do nothing to cancel pthread 6, probably exited already: 0x237fe700 0
WARN: do nothing to cancel pthread 7, probably exited already: 0x22ffd700 0
INFO: User End ROL2TH Executed
proc_end done
PROC THREAD EXIT
  
```

srs2 on clondaq8

```

WARN: do nothing to cancel pthread 0, probably exited already: 0x23fff700 0
WARN: do nothing to cancel pthread 1, probably exited already: 0x28e10700 0
WARN: do nothing to cancel pthread 2, probably exited already: 0x29611700 0
WARN: do nothing to cancel pthread 3, probably exited already: 0x2ae14700 0
WARN: do nothing to cancel pthread 4, probably exited already: 0x2ae613700 0
WARN: do nothing to cancel pthread 5, probably exited already: 0x29e12700 0
WARN: do nothing to cancel pthread 6, probably exited already: 0x237fe700 0
WARN: do nothing to cancel pthread 7, probably exited already: 0x22ffd700 0
INFO: User End ROL2TH Executed
proc_end done
PROC THREAD EXIT
  
```

EB1 on clondaq6

```

DEB_END: all threads are exited
codaEnd 10
codaEnd 11
.....
codaExecute done
CODAtcpServerWorkTask exit ?
CODAtcpServerWorkTask exit !
  
```

ER1 on clondaq6

```

UDP_standard_request >sta:ER1 downloaded<
UDP_standard_request >sta:ER1 downloaded<
UDP_standard_request >sta:ER1 downloaded<
UDP_standard_request >sta:ER1 downloaded<
UDP_standard_request >sta:ER1 downloaded<
UDP_cancel: cancel >sta:ER1 active<
codaUpdateStatus: updating request done
codaExecute done
CODAtcpServerWorkTask exit ?
CODAtcpServerWorkTask exit !
  
```

ETT2 on clondaq4

```

UDP_standard_request >sta:ETT2 downloaded<
UDP_standard_request >sta:ETT2 downloaded<
UDP_standard_request >sta:ETT2 downloaded<
UDP_standard_request >sta:ETT2 downloaded<
UDP_standard_request >sta:ETT2 downloaded<
UDP_cancel: cancel >sta:ETT2 active<
codaUpdateStatus: updating request done
codaExecute done
CODAtcpServerWorkTask exit ?
CODAtcpServerWorkTask exit !
  
```

ET1 on clondaq6

```

UDP_standard_request >sta:ET1 downloaded<
UDP_standard_request >sta:ET1 downloaded<
UDP_standard_request >sta:ET1 downloaded<
UDP_standard_request >sta:ET1 downloaded<
UDP_standard_request >sta:ET1 downloaded<
UDP_cancel: cancel >sta:ET1 active<
codaUpdateStatus: updating request done
codaExecute done
CODAtcpServerWorkTask exit ?
CODAtcpServerWorkTask exit !
  
```

livetime

Rates

Fig. 3

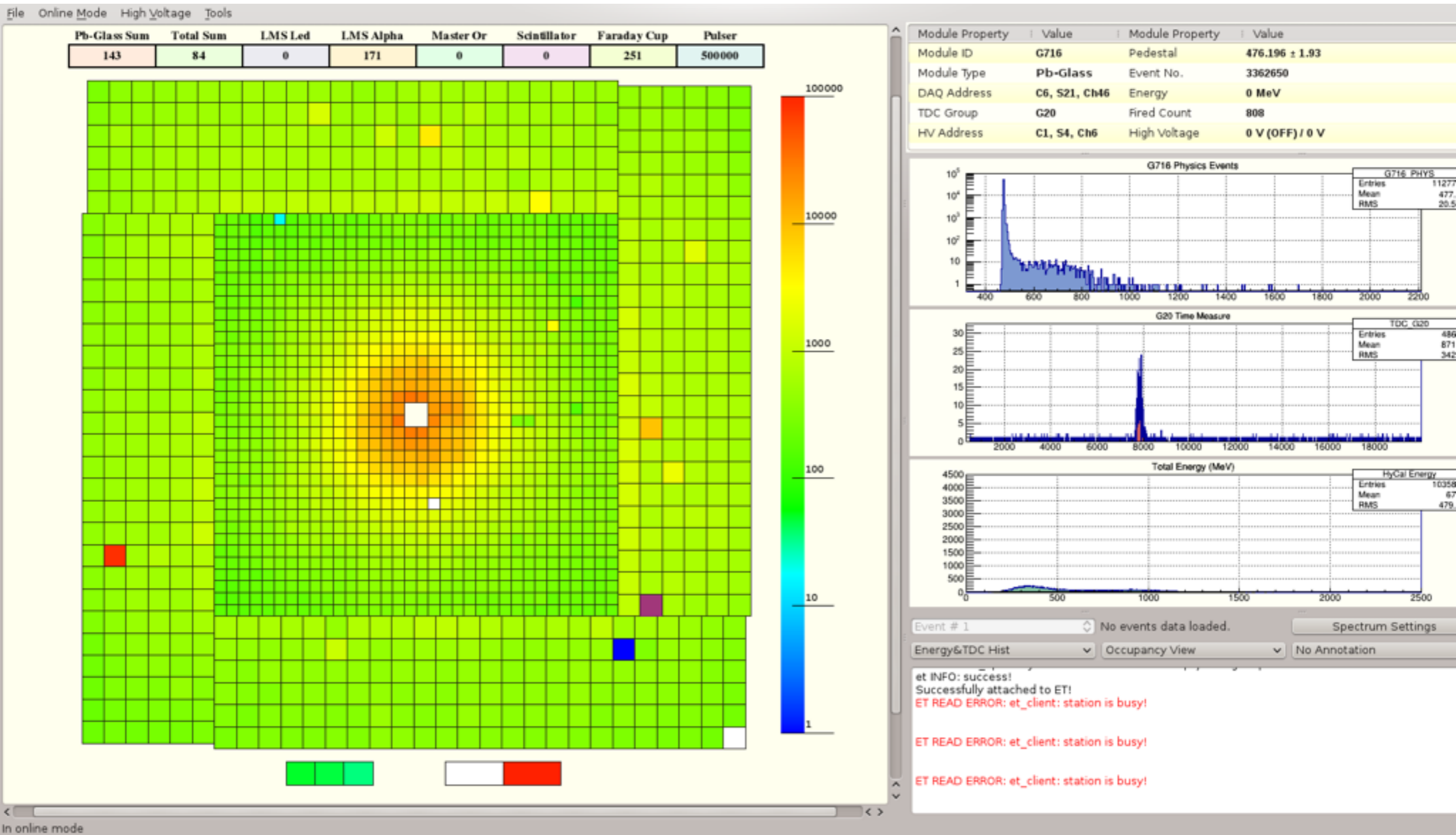


Fig. 4

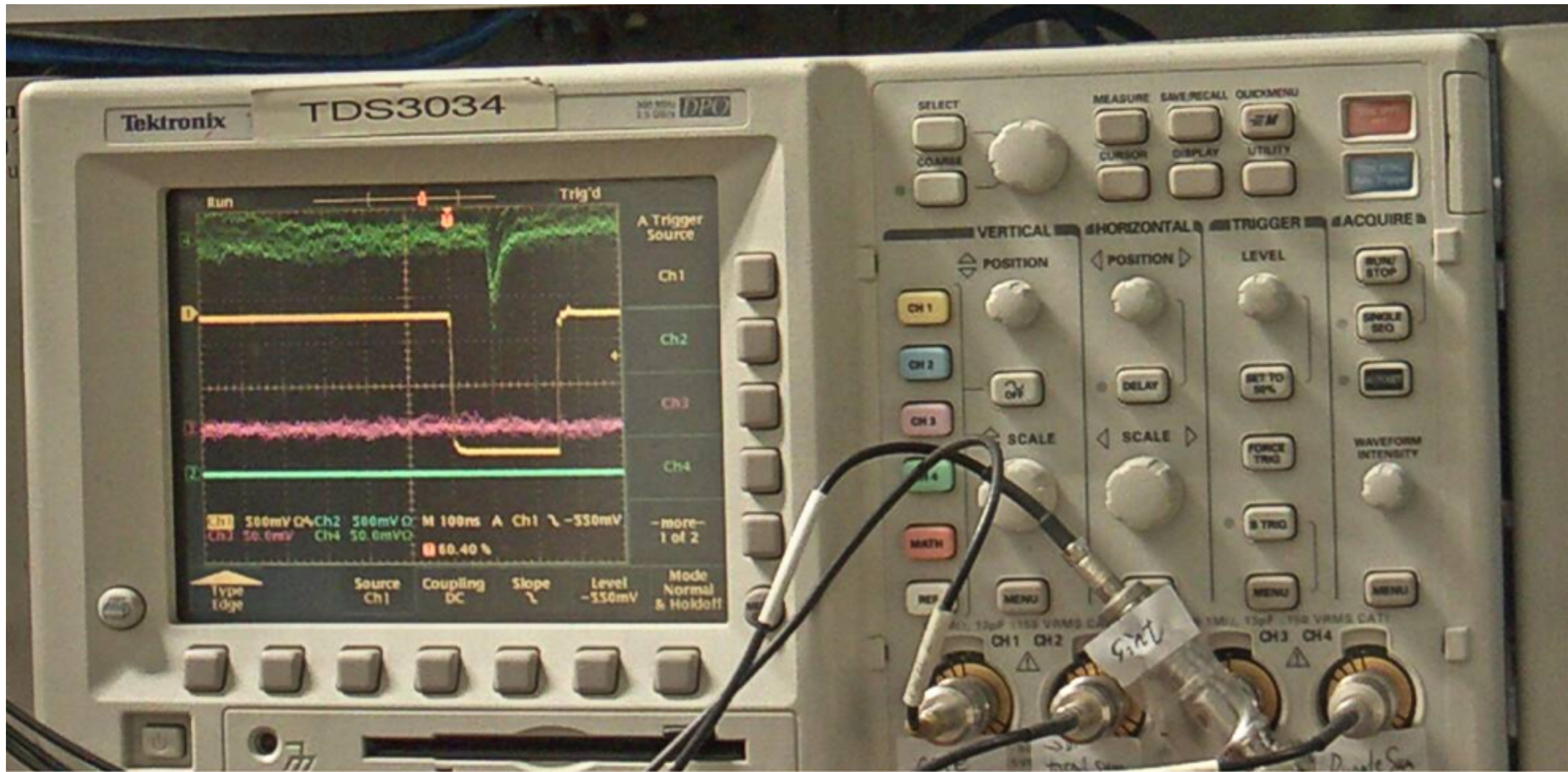


Fig. 5

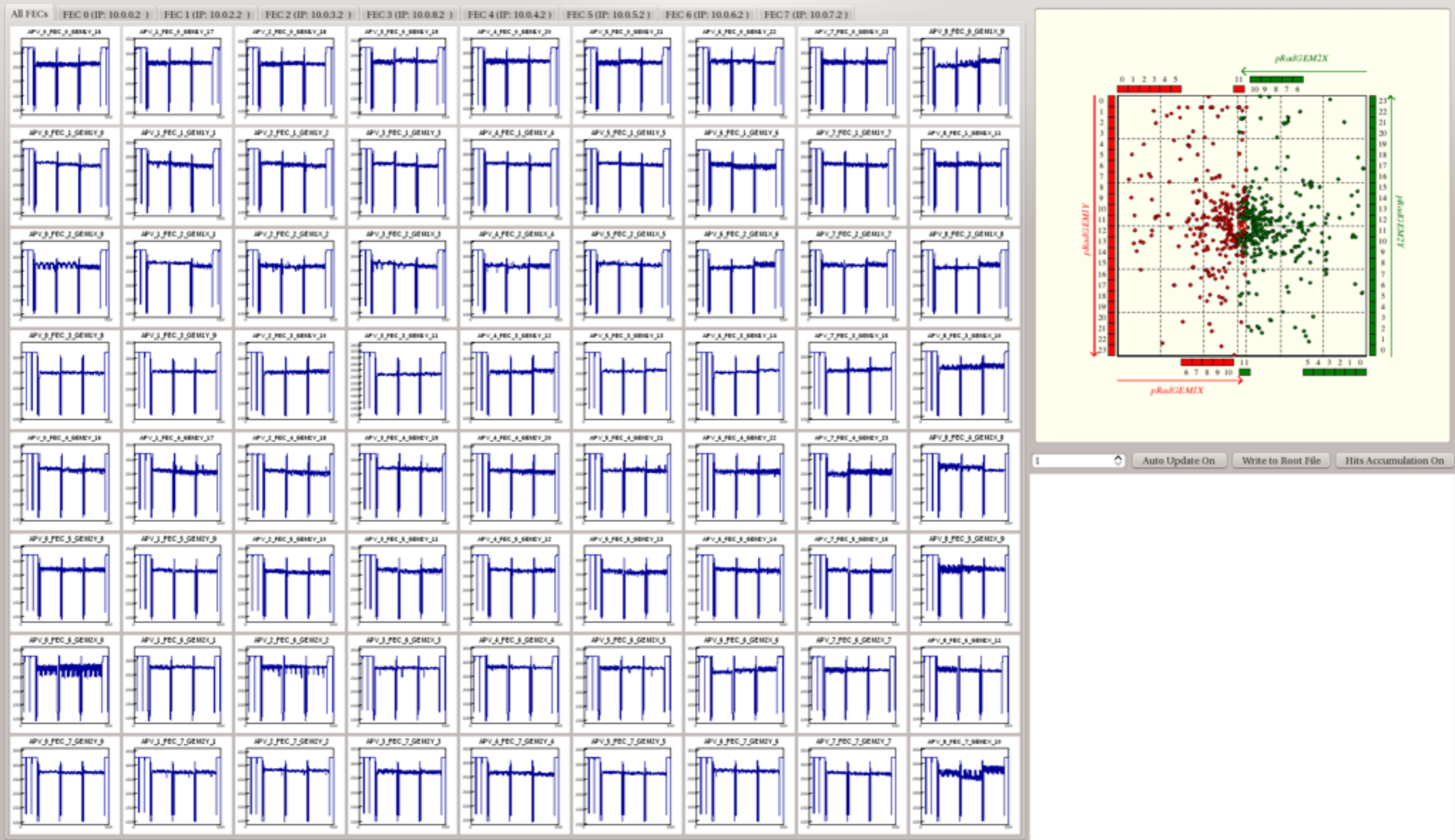


Fig. 6

AXIS 2130R PTZ Network Camera

AXIS COMMUNICATIONS

Admin

IRIS Close Open Auto

FOCUS Near Far Auto

ZOOM Wide Tele

Sun Jun 5 01:43:07 2016

Select preset position:
hycal1

Up

TILT

Down

PAN Left Right

H

Fig. 7



Fig. 8