04/Aug/2005

RUN # 9368 pedestal. no data written

RUN # 9369. Gain adjustment RUN. no data written

RUN #9370 ~ #9376

HV adjust RUNs w/o writing data

Several channel's gains are adjusted by hand.

22:55 RUN #9377 Pedestal (writing data)

22:57 RUN #9378 LED To check gains (a)

HV adjusted (and fixed) by hand

- T7 770V.
- T13 730V ← because of HV trip when higher voltage
- T14 830V

T7 & T14 probably have high QE and due to this if we operate them at 1×10^6 gain, they cannot be calibrated.

Saved AS 050804_2.hv.

One new problem.

BK3 signal cannot be seen....

(was already found yesterday!)

23:08 RUN #9379 HV adjust RUN again (no data written)

04/Aug/2005

- Now T7 & T14 HVs are set to be 738V and 844V respectively
- T13 HV is kept to be 730V
- T28 HV is fixed to be 750V
  T38 HV is fixed to be 760V

both by hand saved as 050804_3.hv

23:24 RUN #9380 HV adjust again (no data written)

T28 further reduced to 720V

Saved as 050804_4.hv

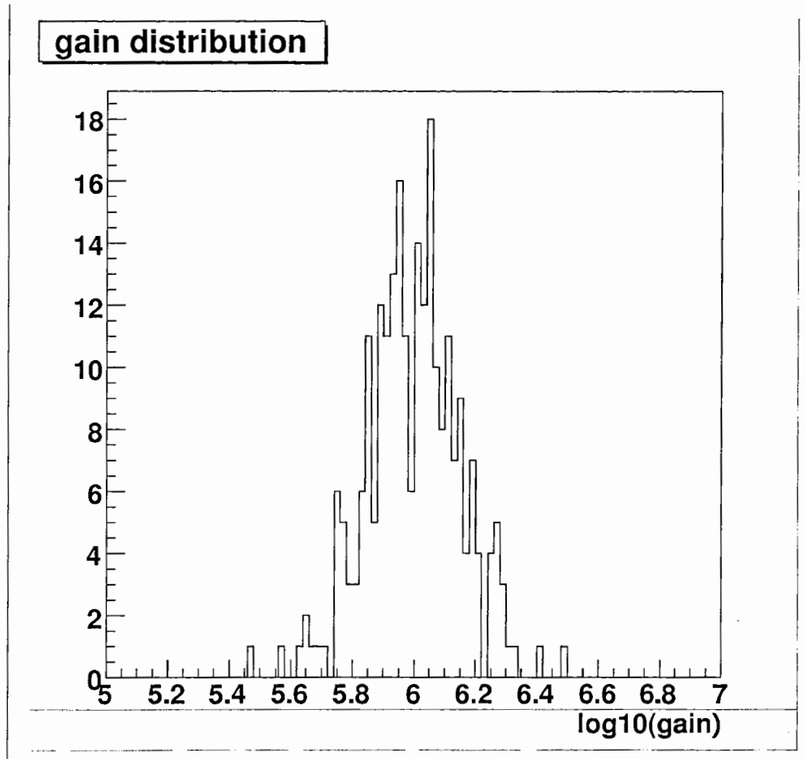
23:25 RUN #9381 HV adjust check (no data written)

Result will not be adopted

After "adjustment", 050804_4.hv loaded again

BK3 signal check

In the data base signal should come in To the splitter 3-5-6, but not cable is plugged to the input. This must be fixed tomorrow.



HV file
050804_4o_4V

We may need further adjustment by hand on 0

05/Aug/05

0:10 Circulation Pump Stopped.

Please start the pump tomorrow morning.

25-Aug-2005

8:45 Circulation resumed.

HV error : hv01-6-9 (BT-33)

Signal check for BK3 (G10 : 8-19).

this channel is supposed to connected to splitter 3-5-6.
but connected to splitter 3-8-2.

↳ found that all the channels in splitter 3-8 are NOISY

10.20 HV error : hv01. 4-11.

12:03 Run #9383 pedestal. (no data written)
~25000 events.

PMTs w/broad pedestal.

ADC#	width	
151	10.3	→ NOT CONNECTED
262	6.2	BK25, ADC 9-70
264	9.2	BK19, ADC 9-72
272	4.9	NOT CONNECTED
274	7.7	NOT CONNECTED
276	4.6	NOT CONNECTED
277	4.7	NOT CONNECTED
281	8.9	NOT CONNECTED
287	14.3	NOT CONNECTED

12:16 Run #9384 LED, HV adjust (no data written)

12:30 Run #9385 pedestal. (data written to disk)

12:34 Run #9386 LED test

12:45 Run #9387 α test.
↳ Trigger rate 0Hz

~~CAMAC~~

Run #9388 α. 0Hz → CAMAC discr was NOT TURNED ON.

05- Aug - 2005

15:08 RUN # 9389 pedestal — JUNK.

15:33 RUN # 9390 pedestal ~ 23000 events } JUNK

15:38 RUN # 9391 LED 327 @ hv 050804-4 }

16:00 ~~BK3~~ BK3 : finally found that input to the splitter is noisy.
upper CR-counters needs to be removed to ~~investigate~~ investigate at the G10 card. (G10, 8-19)

BK3 (G10 8-19) is now connected to splitter 3-9-1

BK3 is now Good.

16:13 #RUN. 9393 pedestal RUN

Adjust HV again 0000

Found that HV 1458 was off.

HV recovered

16:25 #9394 pedestal RUN again

Adjust HV again

current HV setting saved as 050805_1.hv

16:27 #9395 HV adjust check.

Result are not adopted

17:38 #9396 HV adjust check again

Result is saved as 050805_2.hv

adopted

17:55 #9397 HV adjust check again

Too many bad channels, Result is not adopted

OK! BK3 is now available.

Since the gain distribution with 050805_2.hv was rather wider, a new hv setting file was generated by taking average between two settings, 050805_1.hv and 050805_2.hv

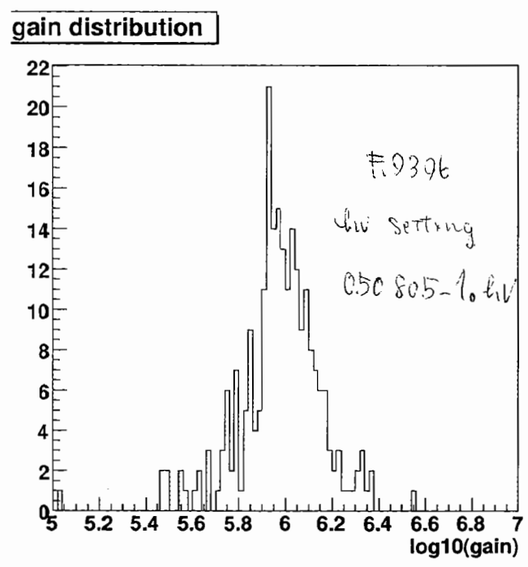
This is saved as 050805_3.hv

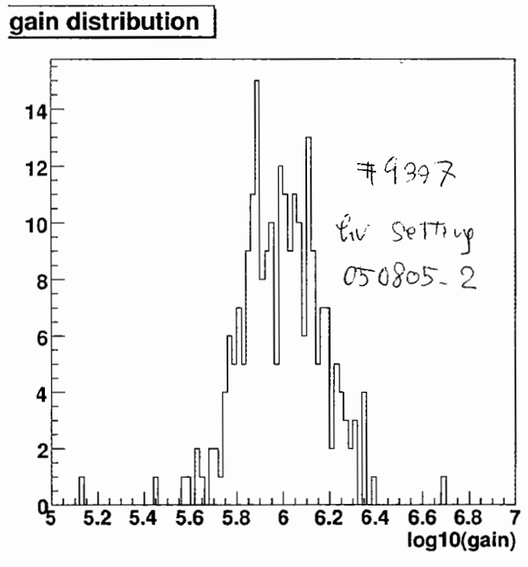
and now loaded.

18:17 #9398 HV adjust check

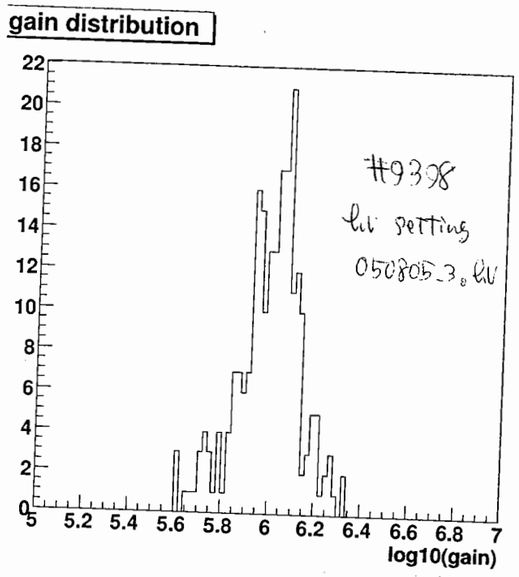
There are some channels that could not be calibrated, but the gain distribution is sharper than that of #9396

See the next page.





05/Aug/05



This means that HV and gain relation implemented in the LPFRAME work may be obsolete. That relation is for R6041 and we should optimise it again for the final design PMT.

New hv setting was made by taking average between 050805_3.hv and result of #9398 and saved as 050805_4.hv

18:45 RUN #9399 HV adjust check.

Even better than previous, but the tail width is similar. So we stop here and manually adjust too high and too low gain channels.

New hv setting is saved as 050805_5.hv.

19:23 RUN #9400 HV adjust check

Adjusted manually Saved as 050505_6.hv

05/Aug/2005.

⑧ COSMIC COUNTER. HV supply set up.

- Suthics time, we don't have usual HV power supply for TC. We use 2 HV supply in this time,
  - HV① --- borrowed by Peter. (HV unit + divider).
  - HV② --- borrowed by Detector group (HV unit)

HV① can adjust each HV channel as 85% ~ 100% of input voltage.

- COSMIC COUNTER HV setting
  - TC1 - top = −2500V @ HV②.
  - TC1 - bottom = −1700V (−2000 × 85%)
  - TC2 - top = −1800V. (90%)
  - TC2 - bottom = −1800V. (90%)
  - TC3 - top = −2000V. (100%)
  - TC3 - bottom = −1850V. (92.5%)

  } HV①

LG no signal. Need to check later

21:08 RUN #9401 HV adjust check.

Adjusted manually and saved as 050806_7.hv

SQL data base is wrong

						HV ch	HV num	HV cable	
L40	180	213	9-21	−1	1-15-10	10-15-9	189	189	7-2
R41	197	214	9-22	−1	1-15-11	10-15-0	180	165	7-3

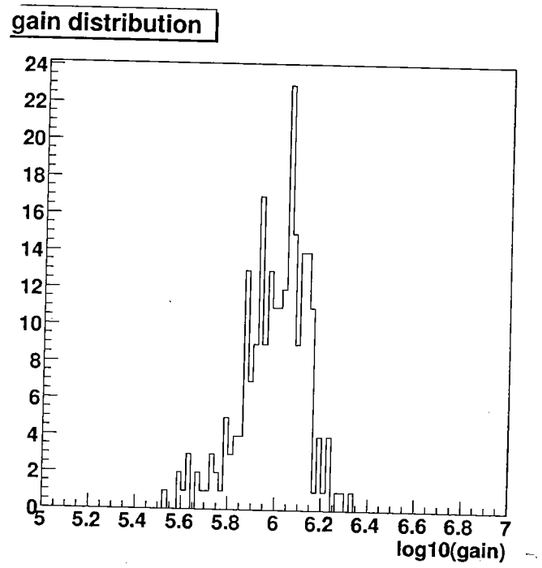
These data are swapped between L40 & R41. not fixed yet

05/Aug/05

22:10 RUN #9402 HV adjust check.

⚠ Data Swap in the database is found in another location

L41 → R40. HV ch, HV num, HV cable(?) data are swapped



Stop there to iterate

← Final Result (online)

23:05 HV adjust switch 4→0

23:06 RUN #9403 pedestal

23:14 RUN #9404 CR test

Several TRIGGERS have been fired ...

23:59 Data is coming. I will leave the DAQ running during night.

06/Aug/05

0:00 Circulation Pump stopped

8:05 Circulation Pump resumed.

9:07 Run #9404 Stop ~1200 events.

connection to hv01 & hv02 is lost. ——

- hv02 (LeCroy 1454) does not bootstrap.
- No beeps at power on (should beep 1 or 4 times)
- LED on slot #2 does not turn on.

Cabling Problem about L40 ⇔ R41, L41 ⇔ R40.

These PMTs were installed into the wrong places at the previous test. When we found this situation at removing PMTs, we changed database for the real positions. But this time, when we install those PMTs, we fixed the wrong cabling and we can use original database.

So. I forget to recover the database to original one.

I asked Ryu today, so that should be working. Sorry.

T. Iwamoto

18:00 Still. hv02 is NOT working.

- Power supply inside hv02 looks alright (correct voltage generated)
- Fuses ok (each HV card, PCI(?) boards on the mother board)
- LEDs on slot #2 & #3 don't come on.

21:30

- HV02 NOT working yet.
  - I opended HV02 and ~~[illegible]~~ checked over but I could not find anything
  - Fuse on the motherboard ok
  - Power to the motherboard ok

- Possible solution for HV02
  ~~Use~~ CAEN HV mainframe instead
  - There are 64 ~~[illegible]~~ channels for positive HV
  - We have to wait for the transport from the west to the east till Monday.

- Problem in L6 (no signal) fixed.
  - Cable was not connected at MACRO FANOUT backplane

24:10 Circulation stopped
→ Please restart tomorrow morning

7 Aug 2005

9:30 Circulation resumed.

hv error hi 0-10-10 } → enabled.
0-2-7
0-4-11

1454 slot 2 ch 0-8 205-ID - ~~213~~ 1E.
ch 9: N/C.
ch 10, 11 ~~205-3E, 205-4E~~ 215-3E, 216-4E

slot 3 217-228.

We decided to replace LeCroy 1454 (HV02) by CAEN SY527.

CAEN HV mainframe channel mapping.

CAEN CH#	HV ch	address
1.00	1-00	BK25
1.01	1-0-1	BK30
1.02	1-0-2	BK3
1.03	1-0-3	BK8
1.04	1-0-4	BK14
1.05	1-0-5	BK20
1.06	1-0-6	BK26
1.07	1-0-7	BK31
1.08	1-0-8	BK9
1.09	1-0-9	BK15
1.10	1-0-10	BK21
1.11	1-0-11	BK27
1.12	1-1-0	F14
1.13	1-1-1	F21
1.14	1-1-2	F20
1.15	1-1-3	F15

CAEN CH #	HVch	Address
2.00	1-1-4	F7
2.01	1-1-5	F28
2.02	1-1-6	F25
2.03	1-1-7	F10
2.04	1-1-8	F13
2.05	1-1-9	F22
2.06	1-1-10	F26
2.07	1-1-11	F9
2.08	1-2-0	F19
2.09	1-2-1	F16
2.10	1-2-2	F27
2.11	1-2-3	F8
2.12	1-2-4	F0
2.13	1-2-5	F6
2.14	1-2-6	F12
2.15	1-2-7	F18
3.00	1-2-8	F24 → 1-2-9 (F30) is OFF
3.01	1-2-10	F31
3.02	1-2-11	F32
3.03	~~1-2-12~~ 1-3-0	F33
3.04	1-3-1	F34
3.05	1-3-2	F35
3.06	1-3-3	F29
3.08	1-3-4	F23
3.09	1-3-5	F17
3.10	1-3-6	F11
3.11	1-3-7	F5
3.12	1-3-8	F4
3.13	1-3-9	F3
3.14	1-3-10	F2
3.15	1-3-11	F1

3.07 is broken

- CAEN SY527 parameters

  IOset (max. current) = 200 μA
  SVmax (max. voltage) 1250 V
  Rup = ~~Rdown~~ (ramp up speed) 60 V/s
  Rdown 60 V/s
  Trip time 0.1
  Pon (action when SY527 is turneon) OFF
  Pdwn (action when ~~[illegible]~~ trip happens) Kill

2:15 • HV is applied to the PMs connected to CAEN SY527 according to HV table, 05086-7.hv
• It is done manually via RS232C.
2:30 Circulation stopped.

tomorrow's menu

- Restart circulation
- Modify SCFE so that it runs without HV@2
- Check gain distribution to make sure that the setting of the CAEN SY527 is done correctly.
- Start DAQ.
- (Switch to CAEN also for cosmic-ray counter HV.)
- (Try repair of LRS1454 (replace battery on mother board?))

8:15 One of the main power was stopped.
UPS was working, but MSCB crate was stopped.
According to that, slow control was also stopped.
Fortunately, the pressure of inner vessel was ~ 0.12 MPa.

We recovered the power, and restarted slow control.

8:30 Pressure of innervessel became 0.11MPa.
Restart circulation,

11:00 { modified ODB to make it work without hv02
Difference is written in megaulnol:online/odb/050808_1_2.diff
megaulnol:online/src/scfe/frontend.c is also changed
DEVICE_DRIVER hv_driveH[]= {

11:10 CAEN HT was tripped for all channels →
All channels of HT was set ON manually.

11:12 #9405 pedestal after changing HT from LRS1454 to CAEN.
ADC # 148, 149, 150, 153 RMS ~ 4.
248

11:23 #9406 LED

11:42 #940827 alpha.

when we analyse LED data at offline mode,
" XeCalibQE.QE & XeCalibQE.QEError was not found ".
message appeared. Now we don't have QE data for new PMTs.
So all PMTs was set to the default value " 0.15 " by Ryu. by hand.

12:40 #9408 eR

12:40 One of the main power was shut down again !!
We checked the power line, and changed the
power line of CAEN to another line.

14:23 #9409 LED

ADC # ~~5~~7		overflow
#65		
#68		
#81		
#92		
#117		
#155	"	(2 points)
#167		"
#185		
#193		"
#196		
#197		
#208		
#213	strange	
#241		"

too many channels were overflow.
I checked HT value between now & 050805_7.hv.
Different !!
I made " 050808_1wCAEN.hv " from 050805_7.hv
for 192 channels.

8/8/2005. Mon.

15:15. load "050808_1w CAEN.hv".

15:17 #9410 pedestal.

15:18 #9411 LED

Online monitor

gain ~ HV^9

ADC #12	overflow (3 points)	(T3)	823 → ~~741~~	762 V
#28	overflow (1 point)	(F15) 1%	863 →	806 V
#68	" (2 ")	(T21)	726 →	~~653~~ 672 V
#81	" (5 ")	(T14)	844 →	~~675~~ 723 V
#88	" (0.5 ")	(T16)	822 →	~~740~~ 761 V
#155	" (1 ")	(T25)	700 →	~~630~~ 648 V
#167	" (1 ")	(R28)	800 →	741 V
#168	" (2 ")	(T27)	737 →	682 V
#213 (R41)	no signal →	low gain.	750 →	~~675~~ 877 V
#214 (L40)	(3 ")	overflow	900 →	833 V
#236	overflow (1 ")	(T38)	785 →	727 V

Saved as 050808_2.hv

17:34 #9412 Pedestal

17:36 #9413 LED

HV adjusted again (manually)

#69	overflow (1pts)	(L21)	753 → 697 V
#92	overflow (1pts)	(T15)	877 → 812
#213		R41	877 -> 947 V

- CAEN s'527 looks wrong. (Not consistent with HV set values in 050806_7.hv) → modified.

18:16 #9414 pedestal

18:17 #9415 LED

T14 723V → 760V

T15 812V → 830V

→ saved as 050808_3.hv

22:30 #9417 pedestal

#9418 LED

22:44 #9419 alpha 50k events

22:51 #9420 alpha 50k events

Failure in gain calibration

(F30 OFF)
(R37 OFF)

- F20 0×10^6 → pedestal ok, splitter out ok.
- R28 0×10^6 → splitter out waveform distorted
  ⇒ ~~other output~~ switch to the other splitter output
  IC in the splitter has to be replaced later.
- BK17 0×10^6 → pedestal OK, splitter OUT OK.

⇒ F20 & BK17 need further investigation

23:45 #9421 CR

24:20 Circulation stopped.

Tomorrow's menu

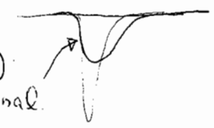
- Restart circulation
- Further analysis of alpha data
  - Calculate absorption length
    (lptframework gives strange absorption length)
- Investigate failure in gain calibration (F20, BK17)
- Install UPS control software (already tried; but NOT successful

9/8/2005 Tue.

8:10 Circulation restart

8:50 Stopped. #9421 OR run.

	Burndy	delay cable. ~~ADC card (pedestal)~~
F20	O.K.	not sharp signal
BK17	O.K.	O.K.



I checked #9418 offline analysis and found BK17 seems O.K. (1.09×10^6).

F20 HV value 877V → 947V

12:00 #9422 pedestal → abort. "clean" command at odbedit & restart mhttpd.
12:05 #9423 pedestal
12:07 #9424 LED
} junk. forgot to change F20.
12:10 #9425 pedestal.
12:12 #9426 LED
12:18 #9427 ∝ but after taking 534 events, online program freeze.
12:25 #9428 ∝ restarted but LRS1454 doesn't respond.
12:41 #9429 ∝ HV was off. stopped.
12:52 #9430 ∝

Bad channel check

F20. still bad
R28 " (seems overflow 741V → 686V)

13:00 megon1n01 kernel panic. restarted

saved. 11 050808-4.hv

14:26 #9431~9433 junk.
#9434 pedestal.
14:48 #9435 LED.
14:52 #9436 ∝.

15:50 HV #0-6-4 R22 error.

F20 check ADC card. 13-29 (ADC30) ⇔ 13-28 (ADC29)

16:15 #9437 pedestal
16:16 #9438 LED. No difference. So ADC card O.K.

ADC mini cards recovered to normal places

Next. I swapped fan-out signal 0-3-6 ⇔ 0-3-5
(F20) (F15)

17:00 #9439 pedestal.
17:00 #9440 LED

suspicious before fan-out output. bad channel swaped.
fan-out output recovered.

Next. I swapped fan-out input 7-29 ⇔ 1-30
(F15) (F20)

17:35 #9441 pedestal junk
17:37 #9442 pedestal
17:39 #9443 pedestal
17:41 #9444 LED junk.
18:09 #9445 LED bad channel swapped.

51.3 Ω is seen from the cable between feedthru & MACRO.

F20 seems to be bad before patch panel of Macro splitter.
100kΩ is seen at the cable of patch panel.

9/8/2005 Tue.

19:20 #9446 pedestal
19:26 #9447 LED
19:37 #9448 α.

Bad channel status

F30., R37 HV off

F20: PMT or cable in front of patch panel of MACRO splitter is bad.

22 39 #9449 pedestal

~~2~~ 39 #9450 LED

22:44 #9451 α

23:15 #9452 CR

23.20 stop circulation

10/8/2005 Wed.

8:15 circulation started.

8:15 #9452 Stopped CR data ~ 1 keventy taken.

8:45 HV 0- #0-7 (T8) 0-1-3 (T9) 0-11-0 (BT35)
Error

To do

- Another LED (forexample, 2 & 6) gain calibration
- HV 800V gain calibration.
- HV scan (1×10^6 HV ± 50V, ±100V) by LED 3 & 7
- Rate dependence.
- Waveform data by using DRS.
- Estimate Absorption length of this measurement

LED position change.

(#3, #7) ⟶ (#2, #6) LED position
(ch2, ch4) (ch2, ch4) LED driver
(75, 83, step1) setting.

9:46 #9453 pedestal

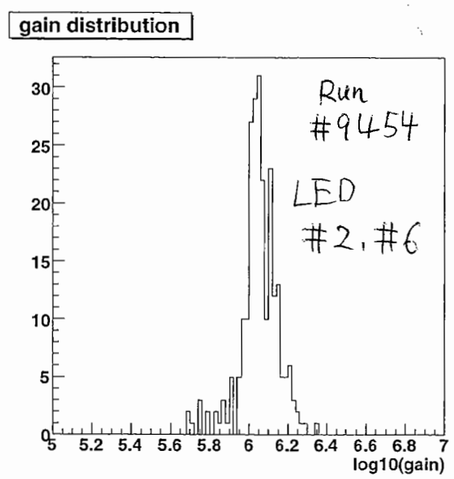
#9454 LED setting check for LED #2, #6

(width, Height ch2, ch4) = (50, 70, 76) step 1
(", 75, 81)

I found LED (#2, #6) data was rather good because the ADC mean vs σ^2 distribution was fitted well.

And F20 also is good.

So I want to try HV adjust run again by using LED (#2, #6).



10:54 #9455 α

10/8/2005 Wed.

R31 gain was 2.27×10^6, 717V → 655V
R33 gain 1.89×10^6, 786V → 732V
R36 1.74×10^6, 897V → 843V

→ these channels were overflowed at some points,
HV values were reduced manually.

Saved as "050808_5.hv"

11:38 #9456 pedestal
11:39 • #9457 LED #2 & #6

pedestal bad channel by offline analysis

ADC #256, #260, #267, #286 ⇒ These are miss fit.
No problem.

11:47 #9458 α

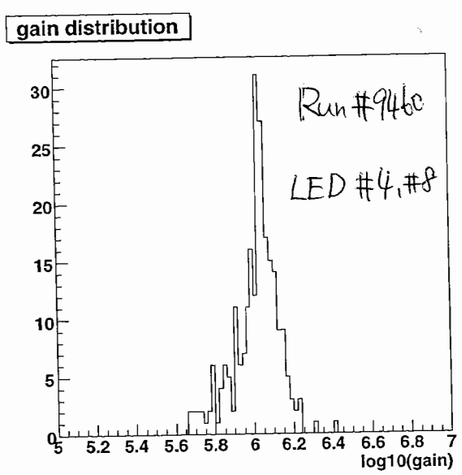
LED settings

(#2, #6) → (#4, #8)
ch2, ch4 ch2, ch4

12:24 #9459 pedestal
12:57 • #9460 LED

Setting
(#4, #8) = (width 50, 78, 8
step 1 //

looks similar result as #2, #6. //



14:50 HV #0-5-1 error (BT14)

14:53 #9461 pedestal

LED setting (#4, #8) → (#1, #5)

(#1, #5) setting
(width height
50, 71, 77, step 1
76 82)

15:51 #9462 LED (#1 & #5)

looks similar results as #2, #6.

LED status	setting	comments
(#3, #7)	(75, 83, step 1)	noisy
(#2, #6)	(70, 76, step 1)	good
(#4, #8)	(78, 85, step 1)	good
(#1, #5)	(71, 77, step 1)	good.

→ LED setting to (#2, #6)

10/8/2005 Wed.

16:50 #9464 LED (#2 & #6) → Intesity of the LEDs seems different from that in #9457

17:00 #9465 alpha

- HV scan (-100V, -50V, +50V, +100V)

▷ +50V "050808_6.hv"
changed manually in CAEN

17:23 #9466 pedestal

17:26 #9467 LED (#2, #6)
→ ~~#~~ not completed because LED is too intense
→ has to change LED setting

• #9468 LED (#2, #6)
with (60, 70, step 1) ⇒ looks alright

18:29 #9469 pedestal

#9470 LED (#4, #8)
with (78, 85, step 1) ⇒ Junk.

#9471 //

20:13 HV error @ HV ch 0-2-7
#9472 LED (#4 #8) with (76, 83 step1)
⇒ ~~too~~ high intensity?
Junk

20:43 #9473 LED #4 & #8.
(70, 77, step 1)

LED #4 seems no light.

20:48 #9474 pedestal

▷ +100V "050808_7.hv" ← overwritten.
changed manually in CAEN

HV #0-5-7 error. several error → T13 902V → 882V
HV #0-13-4 error.

21:07 #9475. pedestal @ all +100V.

21:10 ~~#~~ #9476 LED #2 & #6
with (60, 70, step 1)

F10 signal dissappeared.
Found the ~~output from~~ MACRO fan-out disconnect!!
→ #9473 ~ #9476 data
don't have F10 signal.

21:18 #9477 LED #2 & #6 again..
LED data seems unstable.

21:25 • #9478 LED #2 & #6

21:40 #9479 pedestal

LED (#4, #8) data needed at this +100V setting, too.
because #9473 data doesn't contain F10 signal.

21:42 • #9480 LED (#4, #8)
LED (#4, #8) with (68, 75, step1)

10/8/2005

▷ −50V "050808_8.hv" T13 → 752V,

22:00 #9481 pedestal
• #9482 LED (#2, #6) with (65, 75, step 1)

22:08 #9483 pedestal
22:10 • #9484 LED (#4, #8) with (78, 85, step 1)

▷ −30V "050808_9.hv"

22:20 #9485 pedestal
22:22 • #9486 LED (#2, #6) with (64, 74, step 1)

All hv channels recovered to the HV values of 10^6 gain. //
using "050808_5.hv" //

22:42 #9487 pedestal
22:44 #9488 CR @ 10^6 gain //
23:30 HV error found @ 0-3-1
24:05 Circulation stopped

11/8/2005

8:28 Circulation pump started
8:29 #9488 stop Trigger Events 1106
8:43 PMT HV all 800V
"all800V_wCAEN.hv" for 192ch.

9:45 #9489 pedestal

9:58 #9490 LED (#2 & #6) ⇒ junk
with (58, 68, step 1).

LeCroy HV tripped. run stopped.

10:~~02~~ 06 #9491 LED (#2 & #6) with (58, 68, step 1)

10:15 #9492 ∝ //
11:05 #9493 LED (#2 & #6) with (59, 69, step 1)

F4 has no data in LED run. → ~~800V~~ 900V
HV setting was 1011V. this PMT should be low gain PMT.
L6 almost same. 970V. → 900V
R41 " 750V (?)
BK28 " 1004V. → 900V

14:22 #9494 pedestal
14:23 #9495 LED (#2, #6) all 800V except for F4, L6, BK28
14:43 #9496 ∝

11/8/2007

We found R16 signal was no response.
We checked the fan-out signal and fan-out was some problem.
Splitter 1-5-4 ADC side was bad.
temporarily, we use TDC side signal.

15:27 #9497 LED (#2, #6)
15:35 #9498 ∝

Rate dependence test

16:24 #9499 pedestal

16:26 #9501 LED (#1, #5, #8)
with (71, 73, 83)

- This LED settings will be used for the background LED to measure rate dependence test.
- rate dependence test by changing clock frequency.
- constant flashing LED (#2, #6) and Background LED (#1, #5, #8) on/off ~30 min. measurement.

18:00 #9502 LED (#2, #6) with (57, 67, step 1)

18:10 #9503 ∝

18:15 HV error #0-7-3
" 0-12-4

19:50 #9504 pedestal

HV L22 800V → 750V
⇒ saved as "almost all 800.hv"

#9505 LED background (#1, 5, 8)
- To see the intensity of BG LED (1, 5, 8)
- Pulser where pulse period is variable is used.
  → From detector group
- Pulse rate ~1.0 kHz

20:35 HV error @ 0-6-4

Rate dependence test

- BG LED 1.0 kHz.

20:40
- #9506 pedestal with NO BG.
- #9507 ~~LED gain calib (#2, #6) with NO BG~~
  → LED constant intensity run with NO BG
  - LED #2 59 (pulse height)
  - #6 70
- #9508 ⇒ Junk
- # ~~9508~~ 9509 LED const. intensity run with BG.
  - (#2, #6) = (59, 70)
  - BG LED (#1, #5, #8) = (71, 73, 83)

all Junk

21:10 #9511 pedestal with NO BG
#9512 Constant LED run with NO BG
LED (#2, #6) = (59, 70)

#9513 const LED run with BG

- const LED (#2, #6) = (59, 70)
- BG LED (#1, #5, #8) = (71, 73, ~~78~~ 83) at 1KHz

#9516 LED calib run without BG

- LED (#2, #6) = (57, 67) as 1st step
- NO BG LED

9514, 9515 Junk.

#9517 LED calib run with BG

- LED (#2, #6) = (57, 67) as 1st step
- BG LED (#1, #5, #8) = (71, 73, ~~78~~ 83) at 1KHz

#9518 pedestal with BG at 1KHz

BG LED 2KHz

#9519 Junk.

#~~9519~~ 9520 pedestal without BG

#9521 const. LED run without BG

const LED (#2, #6)

#9522 const LED run with BG at 2KHz

LED intensity setting is the same as ~~in~~ in 1KHz test

#9523 pedestal with BG

BG LED 4KHz

22:07 #9524 pedestal without BG.

#9525 Const LED run without BG.

LED #2, #6

intensity is the same as in 1KHz test

#9526

22:12 const LED run with BG at 4KHz

#9527 pedestal with BG at 4KHz

BG LED 6KHz

22:16 #9528 pedestal without BG

#9529 const LED without BG

⇒ Junk. It seems no light from #2 & #6

⇒ LED setting changed

(#2, #6) = (59, 70) ⇒ (60, 71)

#9530 const LED without BG @ 6KHz

#9531 const LED with BG @ 6KHz

const LED (#2, #6) = (60, 71)

BG LED (#1, #5, #8) = (71, 73, ~~78~~ 83)

#9532 pedestal with BG

BG LED 8.1 KHz

22:30 #9533 pedstal w/o BG.

#9534 const LED w/o BG

LED setting is the same as @ 6KHz

⇒ Junk ~~no light again~~

⇒ LED setting changed to (61, 72)

#9535 const LED w/o BG

(#2, #6) = (61, 72)

#9536 const LED w/o BG

(#2, #6) = (60, 71) ⇒ no light

⇒ wrong! just problem of pedestal.

⇒ this data is still valid

23:28 HV error @ 0-11-4

23:45 Circulation stopped.

12/8/2005

8:07 circulation started

10:24 **Rate dependence test again**

~~BG LED 12 kHz~~

#9537 Junk

10:24 #9538 pedestal w/o BG

#9539 LED BG monitor (1, 5, 8)
- To see the intensity of BG LED
- BG LED (#1, #5, #8) = (71, 73, 83)
- Rate ~ 100 Hz

⚠ see the comments 4 pages later

BG LED 12 kHz

#9540 pedestal w/o BG

#9541 const LED run w/o BG
- const LED (#2, #6) = (60, 71)

11:16 #9542 const LED run ~~with BG~~ without BG
- const LED (#2, #6) = (60, 71)
- ~~BG LED (#1, #5, #8) = (71, 73, 83)~~
- ~~Rate 12 kHz~~

11:17 #9543 pedestal ~~with BG~~ without BG.

11:20 #9544 const LED run w/o BG.
(#2, #6) = (60, 71) Qsum ~ 1.2×10^5

#9545 const LED run with BG
- ~~BG~~ monitor
- BG LED (#1, #5, #8) = (71, 73, 83) @ 12 kHz

#9546 pedestal with BG.

#9547 BG LED monitor
- BG LED (#1, #5, #8) = (71, 73, 78)
- Rate ~ 100 Hz
- Qsum ~ 2.5×10^5

- ADC # 167 almost overflowed ~ 4000

BG LED 16 kHz

11:30 #9548 pedestal w/o BG

#9549 const LED run w/o BG.
Qsum ~ 1.2×10^5

#9550 const LED run with BG
- BG rate 16 kHz
- Qsum ~ 1.2×10^5

#9551 pedestal with BG.

11:42 #9552 BG LED monitor
- BG LED setting same as before
- Qsum ~ 2.5×10^5

BG LED 24 kHz

11:51 #9553 pedestal w/o BG

#9554 const LED run w/o BG
Qsum ~ 1.2×10^5

#9555 const LED run with BG
- BG rate 24 kHz
- Qsum ~ looks a bit larger than 1.2×10^5

#9556 pedestal with BG

#9557 nothing

#9558 BG LED monitor
- 100 HZ
- 2.5×10^5 (Qsum)

- ADC counts are overflowed for R31, R28 in BG LED monitor run.
  R31 800V → 780V
  R28 800V → 780V

#9559 BG LED monitor
- 100HZ
- HV for R28, R31 reduced.
- Qsum ~ 2.4×10^5

12:30 HV restored for R31, R28
R31 780V → 800V
R28 780V → 800V

#9560 BG LED monitor
- 100 HZ
- Qsum ~ 2.3×10^5 → ?

#9561 pedestal with (reduced) HV for R31, R28

#9562 pedestal with restored HV for R31, R28 (800V)

#9563 BG LED monitor
- 100 HZ

14:33 #9564 BG LED monitor
- 100HZ
- Qsum ~ 2.06×10^5

~~#9565~~

BG LED 32 KHZ

#9565 pedestal

14:40 #9566 const LED w/o BG
Qsum = 1.2×10^5

#9567 Junk

#~~9567~~ 9568 const LED with BG
- BG rate 32KHZ
- Qsum ~ 1.2×10^5

14:48

#9569, #9570 Junk

#95~~69~~ 71 BG LED monitor
- 100 HZ
- Qsum ~ 2.33×10^5

BG LED ~~46~~ 47 KHZ

#9572 pedestal

14:58 #9573 const LED w/o BG
Qsum ~ 1.17×10^5

#9574 const LED ~~w/o~~ with BG
- BG rate 47 KHZ
- Qsum ~ 1.3×10^5

#9575 BG LED monitor
- 100 HZ
- Qsum ~ 2.5×10^5

BG LED 63 KHZ

15:10 #9576 pedestal

#9577 const LED w/o BG
HVerror @ 0-3-9 during this run.

#9578 same as #9577
HV error @ 0-5-1 during this run.

#9579 same as #9577
HV error @ 0-2-0

#9580 same as #9577

#9581 Junk

#9582 const LED with BG 63 KHZ
- BG rate 63KHZ
- HV error @ 0-10-0

#9583 same as #9582
- HV error @ 0-4-4

#9584 const BG LED run
- BG rate 63 KHz
- LED
- stop flashing during the run
- HV error @ 0-10-5
  0-1-9
  0-7-0

#9585 BG LED monitor
- ~100 Hz
- 2.3×10^5
- Qsum

#9586 BG LED monitor ~100Hz

⚠
- It is found that trigger setting was wrong for BG LED monitor run for today (since #9539)
- LED #2 & #6 flashed also in BG LED monitor run
- The contributions from #2 and #6 have to be subtracted in estimation of the amount of light from BG LED (#1, #5, and #8)

#9587 pedestal

#9588 BG LED monitor
- ~100 Hz
- Qsum ~ 1.85×10^5
- #2 & #6 OFF

Gain calibration with flashing BG LED

• NO BG

#9589 pedestal

~~#9590 LED gain calib w/o BG~~
~~• Modified led.dat to~~

#9590 Junk

#9591 pedestal

#9592 LED gain calib w/o BG
- LED (#2, #6) = (57, 67) as 1st step

#9593 LED gain calib w/o BG
- LED (#2, #6) = (58, 67) as 1st step

BG 1KHz

(#9594 Junk)

#9595 LED gain calib with BG
- BG LED (#1, #5, #8) = 171, 73, 78)
- BG rate 1KHz
- HV error @ 0-1-7 during the run

#9596 same as #9595

#9597 BG LED monitor
- 100 Hz
- Qsum ~ 2.6×10^5 (?)

BG 2KHz

#9598 pedestal

#9599 LED gain calib w/o BG ⇒ Junk

~~#9559~~ (#9560 Junk)

17:32 #9601 LED gain calib w/o BG
- BG LED (#2, #6) = (59, 68) as 1st step

#9602 LED gain calib with BG
- BG rate 2KHz
- BG LED (#1, #5, #8) = (71, 73, 78)

12/Aug./2005

17:45 #9603 BG LED monitor
- 200 Hz
- Qsum ~ 2.4×10^5

BG 4 kHz

#9604 pedestal
#9605 LED gain calib. w/o BG
#9606 LED gain Calib. with BG
BG rate 4 kHz

#9608 BG LED monitor
- 200Hz
- Qsum ~ ?

BG 6 kHz

18:12 #9609 pedstal
#9610 LED gain calib w/o BG
#9611 LED gainCalib with BG
BG rate 6 kHz
#9612 BG LED monitor
- 200Hz
- Qsum ~ 2.2×10^5

BG 8 kHz

18:33 #9613 pedestal
#9614 LED gain calib. w/o BG
(#9615,9616 ⇒ Junk)
#9617 LED gain calib with BG
BG rate 8 kHz
~~#9616~~
~~#9615~~ 9618 BG monitor
- 200Hz
- Qsum ~22×10^5

BG 12 kHz

18:57 #9619 pedestal

megonlin01 freezed → reboot

#9620 → Junk.

12/Aug./2005

20:03 #9621 LED gain calib. w/o BG
#9624 LED gain calib with BG ⇒ SC frontend stopped
BG rate 12kHz
#9623, 9622 ⇒ Junk

21:03 #9625 same as #9624
#9626 BG monitor
- 200Hz
- Qsum ~ 1.75×10^5

BG 16 kHz

#9627 pedestal
#9628 LED gain calib w/o BG
#9629 LED gain calib with BG BG rate 16 kHz
HV error
#9630 same as #9629
#9631 BG LED monitor
- 200 Hz
- Qsum ~1.7×10^5

BG 24 kHz

22:07 #9632 pedestal
#9633 LED gain calib w/o BG
#9634 LED gain calib with BG BG rate 24 kHz
#9635 BG LED monitor
- 200Hz
- Qsum ~

HV error @ ~~2-4-6~~ 0-2-6 during the run

#9636 same as #9635
- Qsum ~1.6×10^5

BG 32 kHz

22:37 #9637 pedestal
#9638 LED gain calib. w/o BG
#9639 LED gain calib. with BG BG rate 32 kHz
#9640 BG LED monitor
- 200 Hz
- Qsum ~ 1.6×10^5

23:00 #9641 α

BG 48 kHz

#9642 pedestal
#9643 LED gain calib w/o BG
#9644 LED gain calib with BG BG rate 48 kHz
#9645 BG LED monitor 200Hz
- Qsum ~0.76×10^5(?)