

BEAM TEST 2020

Logbook

2/03/2020 - 16/03/2020

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3/03/20 9²⁰ sensor ~~3V~~

plane	Voltage	J
I	120 V	120 μ A
II	120 V	good
	120 V	150 μ A
III	10 V	~ 50
	30 V	110
	50 V	~ 130
	80 V	~ 170
	120	~ 200
IV	30	~ 80
	50	120
	90	180
	120	140
V	30	~ 80
	60	~ 110
	90	~ 120
	120	~ 140
VI	30	~ 110
	90	~ 90
	120	~ 90 μ V

VIII	120 V	~ 50 μ A
IX	120 V	~ 80 μ A
X	120 V	~ 80 μ A
XI	120 V	~ 70 μ A
XII	120 V	~ 60 μ A
XIII	120 V	~ 100 μ A
XIV	120 V	~ 90 μ A
XV	120 V	
XVI	70 V	~ 0,4 μ A
	120 V	~ 1,2 μ A
XVII	90 V	~ 0,2 μ A
	120 V	~ 0,2 μ A

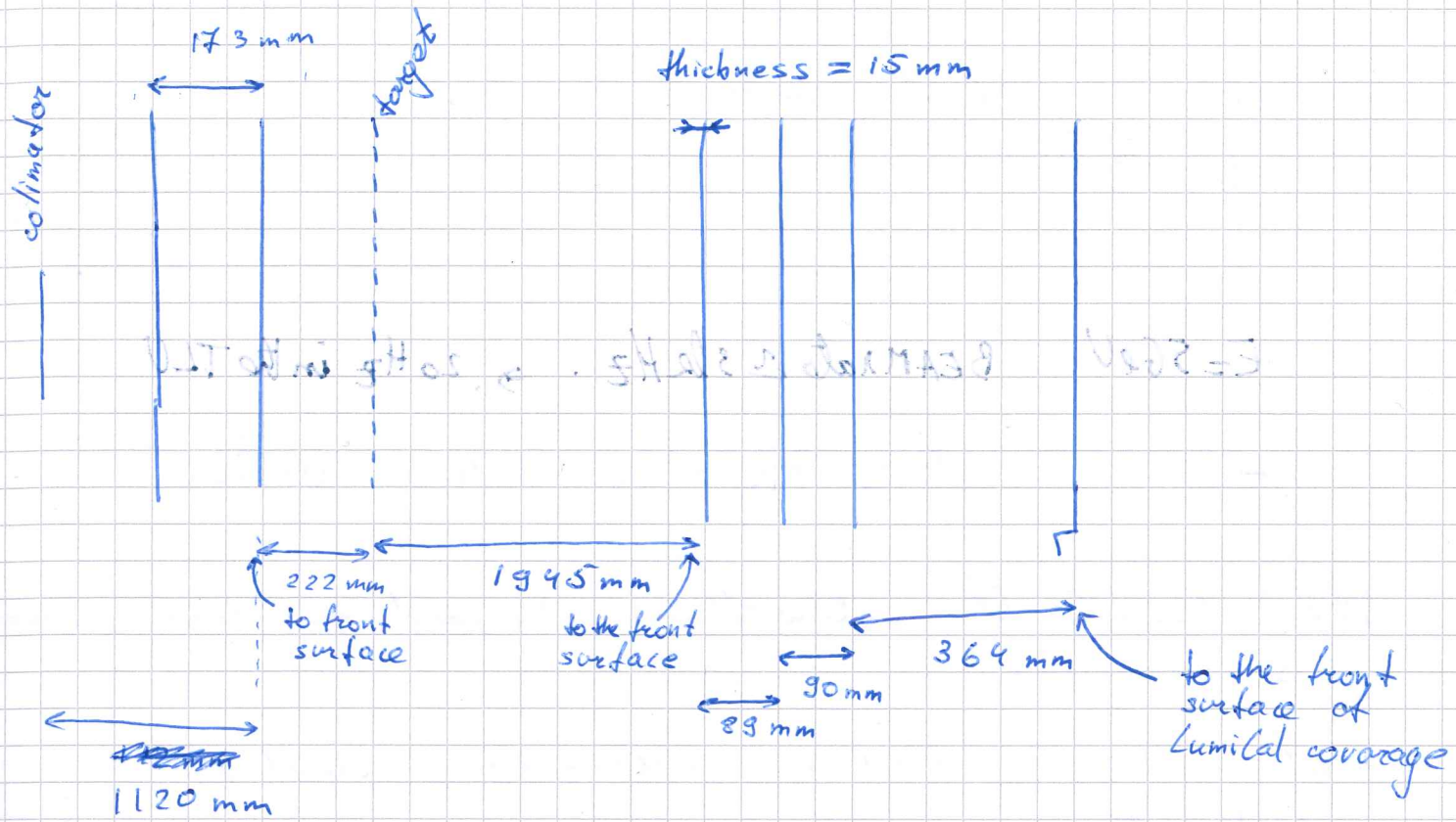
4/03/2020

Changed the order of w plates

Layer 5 #4 sensor 58 was moved to the back of stack

Now:

layer	1	-	no sensor
layer	2		sensor 52
layer	3		sensor 51
layer	4		sensor 29
layer	5		sensor 59
layer	6		sensor 10
layer	7		sensor 57
layer	8		sensor "free"
layer	9		sensor 53
layer	10		sensor 60
layer	11		sensor 64
layer	12		sensor 48S
layer	13		old sensor T2
layer	14		old sensor C3
layer	15		sensor 61
layer	16		old sensor C4
layer	17		sensor 58



5/03/2020

17:57 First beam!
E = 3 GeV

E = 5 GeV BEAM rate \approx 3 kHz \rightarrow 20 Hz in the TLU

E = 3.6 GeV B rate \approx 7 kHz \rightarrow 30 Hz in the TLU

We remove the collimator (5x5), and see beam at Sc. \rightarrow targets

Return again 5x5 mm collimator, and do alignment. \rightarrow ok

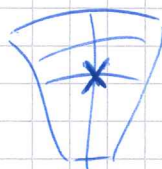
EUDAQ RUN 652 - LONG RUN (\sim 3.5 M events) WITH ALPIDE TELESCOPES AND FLAME READOUT

TRIGGERS = 3 587 733

\Rightarrow center of detector at: 220 (stage 8/11) north/east.

1670 north/south

LUMINAL POSITION: BETWEEN SECTORS



x = ~~2131.3~~ 242.4

y = ~~1670.0~~ 1677.0

06.03.2020 RUN 661 - NIGHT RUN WITH FLAME ONLY RATE \sim 250 ev/s

EVENTS IN FLAME DAQ CORRELATED BY EVENT NUMBER NOT THE TLU NUMBER

6,770,522 EVENTS

THRESHOLDS: PULSE = 6

FIR FILTER: = 40

06.03.2020 RUN 676

11:15

RUN WITH LOWER THRESHOLDS:

RATE = 460 ev/s

95,294 EVENTS

PULSE = 5

FIR = 20

11:17

RUN 677

SAME CONFIG \uparrow , RATE \sim 450 ev/s

103,212 events

ENERGY 5 GeV

11:23

RUN 678

NORMAL RUN, FLAME ONLY, RATE \sim 200 ev/s

EVENTS: 101,018

BOARDS 0,1,2 CONNECTED TO SENSORS 0,1,2

ONE TUNGSTEN PLANE BEFORE SENSOR 0

THRESHOLDS: PULSE = 3, FIR = 20 UNITS, NO TELESCOPE

11:31

RUN 679

EVENTS: 107,178

11:41

RUN 680

EVENTS: 116,033

11:51

RUN 681

EVENTS: 106,194

12:00

RUN 682

EVENTS: 100,974

12:12

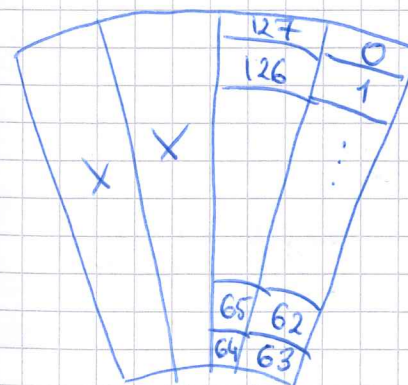
Runs with telescope to check correlation

RUN 683

EVENTS:

12:23 \rightarrow moved to the on-line logbook

FLAME CHANNEL MAP



DEAD CHANNELS IN CONF. 1:		ASIC 0	ASIC 1	ASIC 2	ASIC 3
BOARD 0, SENSOR 0, :		13,22	-	7,14	4
1, 1 :		8,28	10,13	21,31	22,23,28
2, 2 :		13,27	15,24,31	-	30

CONFIGURATION 1: BOARD 0 = SENSOR 3 | BOARD 1 = SENSOR 4 | BOARD 2 = S.5

DEAD CHANNELS: B0, 53 : ...

16:23 Lap Kin, Bohdan / 06/03/2020 /

Energy scan for FLAME boards:

FLAME boards in 4,5,6 planes (configuration B)

16:27 Run 701: 101884 events, 5 GeV

16:40 Run 705

Time	EVDQA RUN	Events	Energy	Comment
16:27	701 701	101884	5 GeV	
16:40	705	100540	5 GeV	
16:53	706	102198	4 GeV	
16:58	707	72180	4 GeV	Fire PDAQ-crash
17:04	709	101934	4 GeV	
17:08	710	107378	4 GeV	
17:13	711	103192	4 GeV	

Plan: 1) Collect 500k for (1-5 GeV) each energy.

2) Debug data, for flame people

3) Configuration of flame boards inside Lumical scan with 5 GeV

4) Remove 1st W absorber and collect debug data.

5) Leave the autopilot run for the night.

SRS will be ready in the morning.

17:19	712	101881	4 GeV	
17:25	714	102376	3 GeV	← Changing energy to 3 GeV
17:29	715	114573	3 GeV	
17:33	716	109795	3 GeV	
17:36	717	108312	3 GeV	
17:46	Saymon adds crash report for Fire DAB instead of warning			
17:46	719	102121	3 GeV	
17:52	722	109804	2 GeV	← Changing energy to 2 GeV
17:56	723	102765	2 GeV	

18:00	725	102765	2 GeV	
18:04	726	123162	2 GeV	
18:07	727	102214	2 GeV	
18:14	731	81664	1 GeV	← Changing energy to 1 GeV
18:18	732	108480	1 GeV	← Fire DAB for run stopped spotted TLV issue
18:21	733	100612	1 GeV	
18:24	734	42452	1 GeV	← Run stopped Fire DAB spotted TLV issue
18:29	735	101723	1 GeV	
18:34	736	101847	1 GeV	
18:37	737	101378	1 GeV	
18:42	739	50396	5 GeV	← Changing energy to 5 GeV
18:52	740	50713	5 GeV	← Debug data: row
19:00	741	50532	5 GeV	← Debug data: pedestals subtr.
19:08	742	51060	5 GeV	← Debug data: CM subtr.
19:20	744	285826	5 GeV	← Debug data: FIR filter
19:23	745	101940	5 GeV	← * stopped, low gain mode

FLAME boards in 7,8,9 planes (configuration C)

20:30	746	86007	5 GeV	← run stopped
20:41	747	102408	5 GeV	← 8 plane doesn't work correctly
20:56	749	53076	5 GeV	← Fire DAB had crashed after spin run
21:01	750	104418	5 GeV	← run stopped Fire DAB had crashed
21:11	751	103631	5 GeV	
21:26	752	52801	5 GeV	← Wrong number was written in all DAB
21:31	753	101303	5 GeV	← Fire DAB had crashed
21:40	754	99532	5 GeV	
21:48	755	57391	5 GeV	

FLAME boards in 10,11,12 planes (configuration D)

Time	Run	Events	Energy	Comment
22:33	757	100580	5 GeV	
22:42	758	100264	5 GeV	
22:50	759	100435	5 GeV	
22:58	760	34025	5 GeV	← Fire DAQ had crashed run was stopped
23:02	761	100908	5 GeV	
23:11	762	101698	5 GeV	
23:20	7684	7437	5 GeV	
00:02	765	117000	5 GeV	
00:20	76775		5 GeV	restart every 10 min

We leave run 775-826 to run autopilot for the night w/o tungsten in the beginning.

9¹⁵ 8/03/20 End of the run

9¹⁷ Run 827-831 5 GeV debug. data for FLAME people

10⁰⁰ End of the debug run

10⁰³ X-Y scan starting from the bottom beam on runs 833, 834

x = 247, 2
y = 1630, 2

no first layer (W plate is removed)

10⁰⁷ x = 247, 2
y = 1655, 6 runs 837, 838

x = 247, 1 runs 843, 844

y = 1641

x = 246, 3 runs 847, 848

y = 1646, 5

x = 245, 7 runs 849, 850

y = 1651, 8

x = 244, 5 runs 852, 853

y = ~~1651, 8~~ 1657, 2

x = 243 runs 854, 855

y = 1668

x	y	Run
241, 6	1678, 7	860
240, 1	1689, 7	861
238, 7	1700, 3	862
237, 4	1712, 3	864
236	1722, 3	865
234, 4	1732, 8	866
234, 4	1732, 8	867
233	1443, 7	868

12²⁰ Beam off

placing tungsten layer 3 back to its position. Connecting FLAME to the last 3 planes of the Lumi Cal. (13, 14, 15)

12⁵⁵ 5 GeV 5 runs / 100k event Autopilot mode

Run 869

x = 242, 3 y = 1677, 2

13⁵⁵ Beam off Autopilot is finished on Run 875

Testing the problematic layer 9 (with sensor 53) → { this is 8th layer in FLAME C configuration.

Connect Flame 50 to it to test why it shows only noise and no signal.

runs 877-881 ~ 5/100k events

x = 242, 3
y = 1677, 2

15° beam off

START setting up SRS system

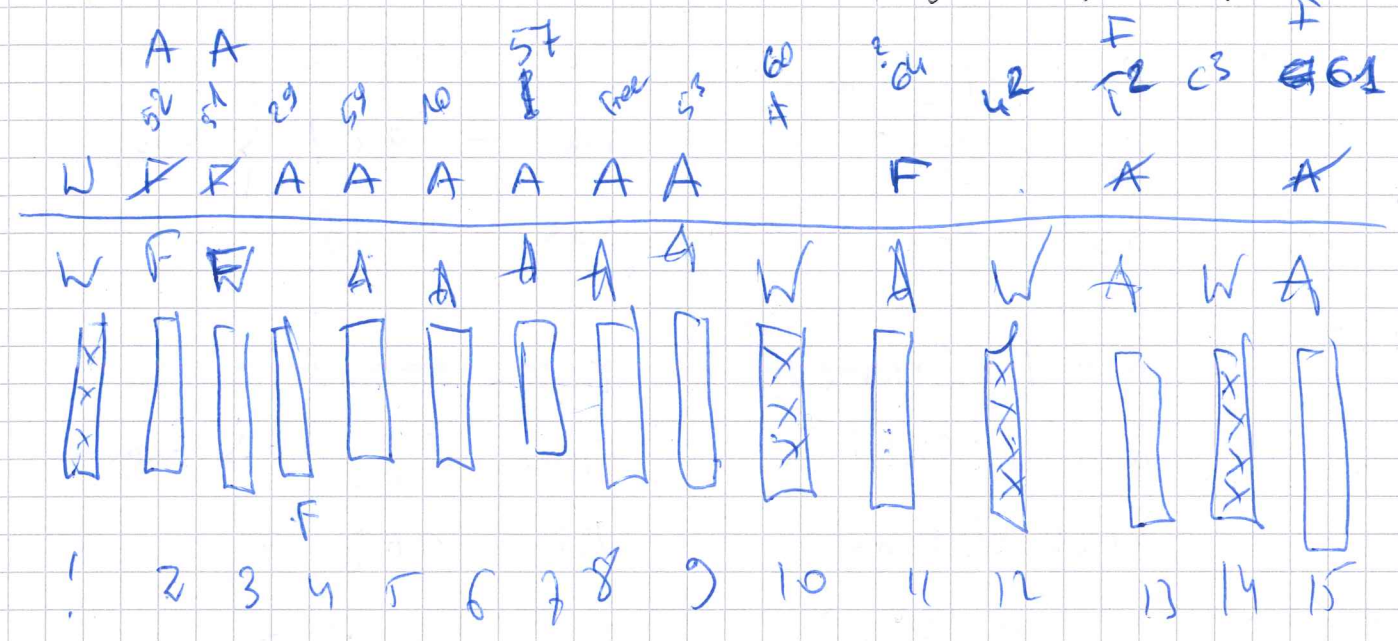
Connecting the SRS to the lumical. Chems:

Sensor (Plane)	APV	HAMI	FEC No
59	4	4	1
10	5	5	2
57	6	6	3
57ee	7	7m	4
53	8	8	5
64	10	9	6
T2	12	10	7
61	14	11	8

Planes 1,2,3 connected to the FLAME boards

HAMI numeration in FLAME starts from TOP

Problems here with noise, especially with planes
 3 - Flame
 4 - SRS
 Stage X/y position until further note - X - 238.4 mm
 y - 1708.1 mm



20:00 APV Recu 4 pedestal

21:27 Run @ 25 Hz

run 6 was too bad so data are not usable really.
 Run 7 for SRS - Run 908 for FLAME

5 GeV e⁻ TLU 27077
 Flame 27076
 SRS 27372 } Events

21:51 Run 909 (Flame) TLU - 3830
 5 GeV e⁻ Flame - 3800
 SRS - 3871 } Events
 Run 8 for SRS

22:03	Run 910 (Flame) Run 9 (SRS) 5 GeV electrons	TLU - 8036 Flame - 8008 SRS - 8114	} Events	
22:10	Run 911 (Flame) Run 10 (SRS) 5 GeV electrons	TLU - 1902 Flame - 1901 SRS - 1918		} Events
22:39	Run 912 (Flame) Run 11 (SRS) 5 GeV electrons	TLU - 50088 Flame - 50061 SRS - 50636		
23:25	Run 913 (Flame) Run 12 (SRS) 5 GeV electrons	TLU - 49835 Flame - 49834 SRS - 50371	} Events	
08/03/2020 00:06	Run 914 (Flame) Run 13 (SRS) 5 GeV electrons	TLU - 50440 Flame - 50352 50358 SRS - 50942		
00:45	Run 915 (Flame) Run 14	- Failed		
00:48	Run 916 (Flame) Run 15 (SRS) 5 GeV	TLU - Flame - SRS -	Flame gives Error Error	

01:13	Run 917 (Flame) Run 16 (SRS) 5 GeV	TLU - 50048 FLAME - 49964 SRS - 50580
01:15	Pedestal RUN	
01:50	Pedestal Run 18 (SRS)	SRS → ~2050 events
01:55	Run 918 (FLAME) Run 19 (SRS) 4 GeV	TLU - 50118 FLAME - 50010 SRS - 50606
02:30	Run 919 (FLAME) Run 20 (SRS) 4 GeV	TLU - 50061 FLAME - 49961 SRS - 50571
02:59	Run 920 - FLAME Run 21 SRS	Failed (telescope is not working)
03:02	RUN 921 FLAME Run 22 SRS 4 GeV	TLU - 50827 FLAME - 50769 SRS - 51398
03:30	RUN 922 RUN 23 4 GeV	TLU - 50163 FLAME - 50055 SRS - 50679
04:00	Run 24 Pedestals RUN	SRS ~ 2500 events

04:06 Run 923 (FLAME) - Failed
Run 25 (SRS) (Telescope isn't working)

04:10 Run 924
Run 26 - Failed

04:15 Run 925 (FLAME) - Failed
Run 27 (SRS)

→ Few times re-run the soft for
• alphas
• telescope
• SRS

04:25 RUN 929 (FLAME)
~~RUN 29~~ (SRS) - Failed
3 GeV
(didn't save file) → closed mmDAQ on computer

04:47 RUN 930 (FLAME) TLU-50127
RUN 29 (SRS) FLAME-50004
3 GeV SRS-50694

05:12 RUN 931 (FLAME) TLU -50156
RUN 30 (SRS) FLAME -50037
3 GeV SRS -50648

05:42 RUN 932 (FLAME) TLU -50298
RUN 31 (SRS) FLAME -50173
3 GeV SRS -50795

06:07 RUN 933 (FLAME) TLU-50336
RUN 32 (SRS) FLAME-50223
SRS-50836

06:35 RUN 33, 34 - Failed |
- Pedestal RUN

06:39 RUN 35 (SRS) SRS → 2089
- Pedestal RUN

06:43 Run 937 (FLAME) TLU -50989
RUN 36 (SRS) FLAME -50855
2 GeV SRS -51485

07:00 Run 935, 936 - Failed because of
Run 37, 38 telescope
2 GeV

07:11 RUN 937 (FLAME) TLU-51278
RUN 39 (SRS) FLAME-51110
2 GeV SRS-51828

07:33 RUN 938 (FLAME) TLU-47841
RUN 40 (SRS) FLAME-47702
2 GeV SRS-48325

08:14 RUN 940 (FLAME) TLU-50017
RUN 44 (SRS) FLAME-49881
2 GeV SRS-50521

08:38 RUN 45 SRS → 2322
- Pedestal Run

08:44 RUN (FLAME) 941 TLU 50 352 EVENTS
 RUN (SRS) 46 FLAME 50 204 EVENTS
 1 GeV SRS 50 915 EVENTS
 Pedestal run 45 Some additional events in SRS run

09:01 RUN (FLAME) 943 TLU EVENTS 50 936
 RUN (SRS) ~~46~~ 47 FLAME EVENTS 50 835
 1 GeV SRS EVENTS 51 450
 Pedestal Run 45

09:25 RUN (FLAME) 944 TLU (EVENTS) 48 761
 RUN (SRS) 48 FLAME (EVENTS) 48 009
 1 GeV SRS (EVENTS) 48 633

11.16. we disconnected the PLATE system
 because of noise in layer 3 and 4.
 we connected chanel 7 and 8 of SRS
 to layer 2 and 3. (layer 2 = SRS 8 - layer 3 = SRS 7)

Run 51. pul mix mensur. π : 30
 S: 12

layer 3 is now ok with a wire similar
 to other layers.

layer 4 is now ok with a wire similar
 to other layers : SRS: ~ 12-14
 MS: ~ 35

11:30

Condition of layer 1 and 2 (3 floats)

Run 52

layer 4: SRS: ~ 18
 MS: ~ 50-55

layer 1 = chnl 10 = SRS 8
 layer 2 = chnl 9 = SRS 7

layer 2: M: 35
 S: 10-12

Run 53: layers 1, 2, 3 are not connected to

any readout system. HV now connected

layer 4: M: 33
 S: 21
 1, 2, and 3 were not
 grounded

Run 54: see as 53 but 1, 2, 3 are now
 grounded

layer 4: M: 82
 S: 20

HV now connected

Run 55: see as 54 but HV connected

layer 4: M: 130
 S: 31

Run 56: L1 NoLLI

L2 Φ
 L3

Run 57 APV Pedestal

Common ground point is added and connected to the wall ground.

Noise in layer 4: (M) 140; (S) 30.

Run 58 APV pedestal

Common ground is disconnected from the wall.

Noise in layer 4: 86 (M), 21 (S)

Run 59 APV pedestal

Grounding has been changed a bit, but it didn't help.

SRS GROUNDING SYSTEMS

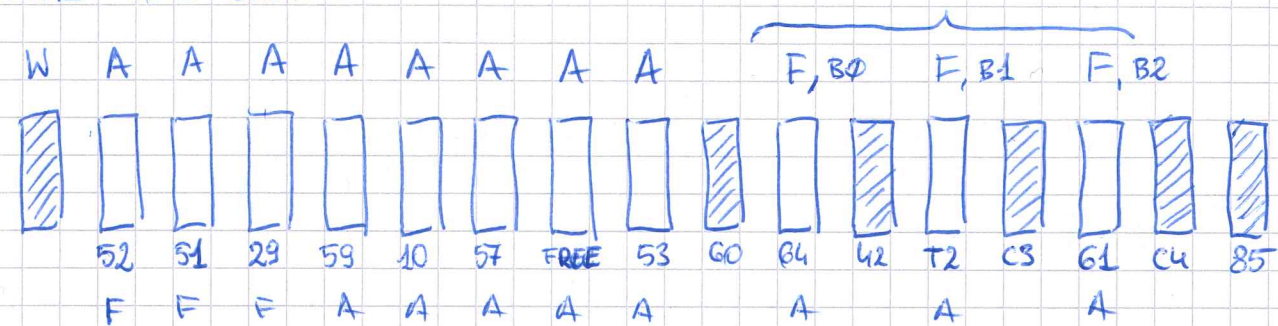
- GROUND FROM THE WALL "ONLY"
- NO FLAME
- SRS connected to layers starting from 3, 4, 5...
- BOX FLOATING
- W - GROUNDED

Run 60 APV Pedestal, lost communication with SRS FEED.

Run 61 Pedestal APV

Run 62 Pedestal APV, regular APV grounding, before connecting FLAME to layer 2.

STACK CONFIGURATION



08.03.2020
23:16

The noise in configuration above was a bit high so we decided to leave only APV for the night shift.

00:25 Run 65 APV Pedestal.

00:40 ~ 26 Hz. Tilted table means for trace y-value APV Runs 66 - 69 are just tests.

01:05 Run 948 TLU - 50382
x - 238.5 (mm) Run 70 (SRS) SRS - 50914 } Events
y - 1679.9 (mm) 5 GeV electrons Run 71

~~01:25 Run 949 TLU -
x - 246.2 mm Run 72 (SRS) SRS -
y - 1659.8 mm 5 GeV electrons~~

01:50 Run 950 TLU - 50093
x - 246.2 mm Run 74 SRS - 50624
y - 1659.8 mm 5 GeV electrons

02:25 Run 951 TLU- 50103
x-244.2 mm Run 75 (SRS) SRS- 50649
y-1659.8 mm 5 GeV electrons

3:00 Run 952 TLU- 50151
x-244.2 mm Run 76 (SRS) SRS- 50684
y-1659.8 mm 5 GeV electrons

3:35 Run 953 TLU- ~~50151~~ 50182
x-244.2 mm Run 77 (SRS) SRS- ~~50684~~ 50720
y-1659.8 mm 5 GeV electrons

Changing x, y: 241.9, 1676.0

4:10 Run 954 TLU- 50061
x-241.9 mm Run 78 (SRS) SRS- 50592
y-1676.0 mm 5 GeV electrons

4:44 Run 954-2 TLU- 50123
x-241.9 mm Run 79 (SRS) SRS- 50656
y-1676.0 mm 5 GeV electrons

Some confusion, we'll have two "run 954's". Both are independent & should be good data - just a filename issue

5:20 Run 955 TLU- 50097
x-241.9 mm Run 80 (SRS) SRS- 50648
y-1676.0 mm 5 GeV electrons

~~Run 956 TLU-
Run 80 (SRS) SRS-
5 GeV electrons~~

~~Changing x, y - 239.0 mm, 1647.7 mm~~

Changing x, y - 236.4 mm, 1719.2 mm

6:01 Run 956 TLU- 50107
x-236.4 mm Run 81 (SRS) SRS- 50654
y-1719.2 mm 5 GeV electrons

6:35 Run 957 TLU- 50093
x-236.4 mm Run 82 (SRS) SRS- 50634
y-1719.2 mm 5 GeV electrons

7:10 Run 958 TLU- 50170
x-236.4 mm Run 83 (SRS) SRS- 50727
y-1719.2 mm 5 GeV electrons

~~7:41 Run 959 TLU- RUN DIED
x-236.4 mm Run 84 (SRS) SRS-
y-1719.2 mm 5 GeV electrons~~

7:47 Run 961 TLU - 36144
 x-236.6mm Run 86 (SRS) SRS - 36547
 y-1719.2mm 5 GeV electrons

8:11 Beam off
 Pedestal run
 Run 87 (SRS) 775 events

8:18 Beam on
 test for finding better x positions
 Beam off
 X = 240.6
 y = 1708.02
 Pedestal run
 Run 88 (SRS) 2336 ev

8:47 Beam on
 Run 963 TLU 59861
 Run 90 (SRS) SRS 60510

9:30 Run 964 TLU - 61748
 Run 91 (SRS) SRS 62434

10:12 Run 965 TLU 51720
 Run 92 (SRS) SRS 52254

10:50 Run 966 TLU 50595
 Run 93 (SRS) SRS 51093

11:27 Beam off
 Tilting the Luminator to 4°
~~y = 1708.02~~
 y = 1708.35 X = 240.6

11:54 Beam On
 Pedestal Run 94 3194

x = 238.5
 y = 1716.4

~ 150k events

Run 968 TLU 51529
 Run 96 SRS 52117

Run 969 TLU 53312
 Run 97 SRS 53882

Run 970 TLU 50258
 Run 98 SRS 50811

14:03 Changing position to

y = 1684.5
 x = 238.3
 Test

Run 972 TLU 50559
 Run 99 SRS 51135

y = 1684.5
 X = 242.1

Run 973 TLU crashed
 → Run 100 (SRS) SRS 4th plane of telescope

Run 974 TLU 50048
 Run 101 (SRS) SRS 50569

Run 975 TLU 51349
 Run 102 (SRS) SRS 51876

16:04. Beam off
Tilting LuminCal at 6°

16:15 Beam on
 $y = 1724, 4$
 $X = 242, 1$ } Pedestal seen 103
 2358 events

16:29
 $y = 1724, 4$ } CH24 Run 98 TLU 52108
 $X = 236, 6$ } Run 106 (SRS) 52692

17:34 Name posit: CH24 Run 982 TLU 2358 events
 large file size due to incorrect pedestal signature → Run 107 SRS 2358 events

18:00 Name posit: CH24 Run 993 TLU 50778 events
 Run 108 SRS 50760 events

18:34 Name posit: CH24 Run 984 TLU 23549 events
 (run terminated because plane DAQ crashed) Run 109 SRS 23446 events

18:56 CH24 Run 985 TLU 27735 events
 Run 110 SRS 28056 events

19:30 CH42
 $X = 239, 7, Y = 1692$
 Run 992 TLU 50399 events
 Run 115 SRS 50901 events

20:00 CH42 Run 993 TLU 51227 events
 Run 116 SRS 51766 events

20:30 CH42 Run 994 TLU 50288 events
 Run 118 SRS 50962 events

06:06 Run 148 APV Pedestal

Run 149 APV Position test.

06:33 RUN 150 (SRS) EVENTS (SRS) run stopped
 RUN 25 (TLU) EVENTS (TLU) error TLU run number
 5 GeV Position $X = 233, 8$ $Y = 1709, 2$
 Pedestal run 148

06:44 RUN SRS 151 SRS EVENTS 50724
 RUN TLU 1002 TLU EVENTS 50784
 5 GeV pos $X = 233, 8$ $Y = 1709, 2$ Pedestal run 148

07:18 RUN TLU 1003 SRS EVENTS 51019
 RUN SRS 152 TLU EVENTS 50486
 5 GeV pos $X = 233, 8$ $Y = 1709, 2$ Pedestal run 148

07:52 RUN TLU 1004 SRS EVENTS 52297
 RUN SRS 153 TLU EVENTS 51723
 5 GeV pos $X = 233, 8$ $Y = 1709, 2$ Pedestal run 148

08:38 Pedestal Run after positioning
 Run 155 (SRS)

~~5 GeV~~

08:48 Run TLU 1007 TLU Events 50406
 Run SRS 157 SRS Events 50942
 5 GeV, $X = 232, 5$ $Y = 1719, 2$

09:22 RUN TLU 1008 TLU events 50553
 RUN SRS 158 SRS events 51071
 5 GeV $X = 232, 5$ $Y = 1719, 2$

09:55

RUN TLU 1009 TLU events 50222
RUN SRS 159 SRS events 50722

5 GeV X = 232.5 Y = 1719.2

10:40

RUN ~~SRS~~ 161 SRS 2068
Pedestal - can not download it

10:46

RUN 163 (SRS)
Pedestal events: 2020

10:50

RUN TLU 1012 SRS events: 50587
RUN SRS 164 TLU events: 50039
5 GeV X: 231.3 Y: 1724.2

11:20

RUN SRS 165 SRS events:
RUN TLU ~~1013~~ 1013 TLU events: 49851
5 GeV X: 231.3 Y: 1724.2

11:57

RUN SRS 166 SRS events: 50812
5 GeV RUN TLU 1014 TLU events: 50389
X = 231.3 Y = 1724.2

← change position

12:56

RUN SRS 167 SRS events: 51297
RUN TLU 1016 TLU events: 60693
5 GeV X = 230.3 Y = 1729.2

13:38

RUN SRS 168 SRS events: 52289
RUN TLU 1017 TLU events: 51740

5 GeV X = 230.3 Y = 1729.2

14:12

RUN SRS 169 SRS events: 50739
RUN TLU 1018 TLU events: 502450

5 GeV X = 230.3 Y = 1729.2

← change position

15:04

RUN SRS 170 SRS events: 50760
RUN TLU 2020 TLU events: 50250

5 GeV X = 229.2 Y = 1734.2

15:39

RUN (SRS) 171 SRS events:
RUN (TLU) 1021 TLU events: 51147

5 GeV X = 229.2 Y = 1734.2

16:11

RUN (SRS) 172 SRS events: 50630
RUN (TLU) 1022 TLU events: 50087

→ change position

16:59

Pedestal Run (SRS) - 173
SRS events: ~2k

17:17

Pedestal Run (SRS) - 174
SRS events: 2038

17:21

RUN SRS - 175 SRS events:
RUN TLU - 1025 TLU events: 50951

5 GeV X: 228.7 Y: 1739.2

17:55 RUN SRS - 176 53989 evt
 RUN TLU - 1026 53577 evt
 5 GeV X: 228.7 Y: 1739.2
 runs 177, 179 failed
 18:32 run SRS - 179 52393
 Run TLU - 1029 51855
 5 GeV X = 228.7 Y = 1739.2

19:15 Switching to the energy scan

Repositioning beam off

19:25 X = 242.6
 Y = 1677.2

↓
 X = 238.4
 Y = 1708.4

Final Position: X = 234.6 Y = 1712.0 →

20:11 Pedestal RUN (SRS) → 181
 run 181, root event: 2077

20:15 RUN (SRS) 182 SRS events: 51215
 RUN (TLU) 1034 TLU events: 50732

Energy 5 GeV

20:50 RUN (SRS) 183 SRS events:
 Run (TLU) 1035 TLU events:

Energy: 5 GeV

→ Failed because of FLAME [Err]

20:58 RUN TLU 1036 events TLU: 51362
 RUN SRS 184 events SRS: 31919
 Energy 5 GeV

21:32 RUN TLU 1037 events TLU: 30068
 RUN SRS 185 events SRS: 30617
 Energy 5 GeV

22:08 RUN TLU 1038 TLU 58062
 RUN SRS 186 SRS 53699

22:55 Switching to 4 GeV

22:55 Pedestal run run 188 - root

TIME	RUN NUMBER	EVENTS
22:58	SRS run 189	51490
	TLU 1040	~50000
23:24	SRS run 190	54397
	TLU 1041	53878
23:55	SRS run 191	
	TLU 1042	

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00:23 SRS run 192 50713
 TLU ~~run 192~~ 1043 50181

00:50

Switching to 3 GeV

00:54 Pedestal run 193.root ~ 2200

00:57 SRS: ~~run~~ run 194 51323
 TLM: 1044 50779

01:20 SRS: run 195 51903
 TLM 1045 51414

01:47 ~~run~~ SRS run 196 50617
~~run~~ TLM 1046 50063

02:09 SRS run 197 53567
 TLM 1047 52967

02:35 Switching to 2 GeV

02:38 Pedestal run 198.root 2157

02:42 SRS: run 199 51549
 TLM: 1048 51030

03:03 SRS: run 200 50663
 TLM: 1049 50134

03:23 SRS: run 201 50810
 TLM: 1050 50288

03:43 SRS: run 202 50762
 TLM: 1051 50248

04:01 SWITCHING TO 6 GeV

04:04 Pedestal run 203.root ~ 2083

4:10 Pedestal run 205.root 2100

4:13 SRS: run 206 } Flame
 TLM: run 1053 } DAQ
 } crushed 28151 But Flame
 } 27849 → .root is OK

~~SRS: run 207 28151~~
~~TLM: run 1054 27849~~

4:48 SRS: run 207 50588
 TLM: run 1054 50049

5:37 SRS: run 208 } Flame
 TLM: run 1055 } DAQ
 } crashed 21185
 20877

6:02 SRS: run 209 } Flame
 TLM: 1056 } crashed 12429
 12294
 - both 2 1055 and 1056 .root trees are ok.

6:17 SRS run 210 50641
 TLM: run 1057 50109

7:10 SRS: run 210 } DAQ
 TLM: run 1058 } Flame
 } crashes 12435
 12795

→ Come back for (isTurnOver=100) → soft flame DAQ

7:27 SRS: run 213 51040
 TLM: run 1060 50534

11/03 08:00 John & Jakub

now running 1 GeV Beam

Finding pedestal again:

08:20 Run 1061
 Run 214 (SRS) SRS ~ 2080
 No Beam

08:30 Run 1067 TLU- 50283
 Run 217(SRS) SRS- 50786
 1 GeV electrons

08:50 Run 1068 TLU- 50795
 Run 218(SRS) SRS- 51312
 1 GeV electrons

09:13 Run 1069 TLU- 50679
 Run 219(SRS) SRS - 51233
 1 GeV electrons

(MEAN X BEAM)	TURNING ON THE MAGNET					TELESCOPE STAGE	X:
	TELESCOPE #	50	51	52	53	54	
• No MAGNET :	483	530	417	461	494	175.7	
• 100 A :	478	530	174	193	206	175.7	
• 100 A :						182.0 185.1	

Run 228 APV Pedestal
 Run 229 APV Magnet off, W and Pb targets.
 1124 Elcme
 (190 μm)
 (135 μm)

00:27 RUN TLU 1125 EVENTS TLU 150613
 RUN SRS 230 EVENTS SRS 150000
 pedestal run 228 5 GeV Magnet 200

02:05 RUN TLU 1126 EVENTS TLU 150500
 RUN SRS 231 EVENTS SRS 152023
 pedestal run 228 5 GeV Magnet 200

03:49 RUN TLU 1127 EVENTS TLU 150342
 RUN SRS 232 EVENTS SRS 151889
 pedestal run 228 5 GeV Magnet 200

05:23 RUN TLU 1128 EVENTS TLU 150938
 RUN SRS 233 EVENTS SRS 152526
 pedestal run 228 5 GeV Magnet 200

07:09 RUN SRS 234 Pedestal RUN
 EVENTS SRS 2284

07:08 RUN TLU 1129 EVENTS TLU 150719
 RUN SRS 235 EVENTS SRS 161426
 pedestal run 234 5 GeV Magnet 200

8:54 Run TLU 1130 Events TLU 23951
 Run SRS 236 Events SRS 24203

9:11 Beam off magnet off
 We're going to remove Lead target and to take the data

9:20 No Pb Target on 2nd moving platform between telescopes planes

But no magnet we have Tungsten target before magnet
pedestal Run 237 ext
pedestal Run (238) 2115 ext

9:30 No magnet ; Beam on

Run TLU	1131	100567	ext
Run SRS	239	101425	ext

10:43 Beam on
No magnet
No W target before magnet
No Pb target between telescopes planes

Run TLU	1132	91443	ext
Run SRS	240	92366	ext

10:47 Beam off

Configuration: 2 Targets:
Tungsten (90 micron) before the magnet
Pb (~1.1 μ m) between telescope planes on the second movable platform

Magnet on 0.2 T

12:05

Beam on
Run TLU 1132 | 118301 ext
Run SRS 241 | 119541 ext

Run TLU 1134 ext
Run 242 ext

Alpide failed stopped the run.

13:25 Beam off
13:36 Trying to fix the scintillator

13:45 TB-coordinators arrived

Run 243 APU Pedestal

Run 244 APU Photon, ERROR, Magnet not set.
1270 TLU

Run 245 APU did not start well, 1271 TLU

Run 246 APU not good.

22:15 Run 247 APU Photons
1285 TLU at ~25 μ event
I_{mag} = 300 A.

Overnight Scan Finished

Events: 1132375 TLU
1143396 SRS

x-(-232.4 mm) y-(-577.9 mm)

5.6
19.6
26

08:05 Re-doing Pedestal
Run 249 (SRS)

08:15 Run 1286 TLU-261895
Run 250 (SRS) SRS-263799 } Events
5 GeV electrons ~ 34 Hz

10:30 Modifying Trigger

Run 251 APV Pedestal

Run 252 APV Failed to start

13:30 Run 253 APV - ~~15362~~ 155203
Run 30 TLU - 153621
5 GeV, Magnet: 300A, rate ~ 33 Hz.

Run 254 Pedestal APV

Run 255 APV Photon 112761 ev

17:00 Run 1507 TLU 112298 ev
W and Pb targets.
Magnet 300A, Rate 32 Hz.

18:06 Run 256 APV TLU: 57088
Run 2508 TLU SRS: 57668

18:39 Run 257 SRS SRS: 70823
Run 2509 TLU TLU 70081

19:20 Run 258 SRS SRS 81276
Run 1510 TLU TLU 80450

20:52 Run 259 SRS SRS 67675
Run 1511 TLU TLU 66988

→ flame crashed!

21:29 Run 260 SRS SRS: 118235
Run 1512 TLU TLU: 117031

22:37 Run 261 SRS 74485 ev
Run 1513 TLU 73683 ev

23:20 Run 262 SRS 0
Run 1514 TLU
Rate 31 Hz

23:34 Run 262 SRS 34401
Run 1515 TLU 34054

07:50 Info EUDAQ & mmDAQ receiving no more events
(cause unclear, took screenshot of mmDAQ) → saved on Desktop of Laptop running mmDAQ
Error messages about Drop events (too many frames) → these also occur in previous run

Done

Run 265 SRS 833 035 evts

Run 1518 TLU 824 539 evts

08:05 Pedestal run

Run 266 SRS 2443 evts

09:01 Run 267 SRS 94737

Run 1519 TLU 93798 evts

09:05 No beam in DESY

- 11:00 called CR, problem with LINAC, will take > 1h to fix
decide to ramp down the magnet

10:42 Copy data to fh1/hb21: /home/teleuser/FCAL_data/Telescope

10:54 Pedestal run (Magnet on @ 300 A)

Run SRS 269 2005

11:01 Problem with mmDAQ (same run number 269 for next run)

→ re-run pedestal run

Run SRS 270 2123

11:03 Beams are back and stable

↙ but SireDAQ crashed, restart

11:06 Start physics run (Magnet on, at 300 A)

Run SRS 272 SRS events: 225371

Run TLU 1522 TLU: 223054

13:08 Run SRS 274 SRS: 202465

Run TLU 1525 TLU 280436

14:58 Run SRS 275 SRS: 137109

Run TLU 1526 TLU: 135772

16:22 Run TLU 1527 SRS: 42038

Run SRS 276 TLU: 41585

Stopped because No Beam.

17:38 Run 1528 TLU 51071

Run 277 SRS 51603

Magnet OFF, but targets are installed (not the best for alignment)

18:05 Run 278 Pedestal SRS.

18:10 Run 1529 TLU 95423

Run 279 SRS 96417

Photons. Magnet: J=300A.

Rate 31Hz.

19:04 Run 1530 TLU 72929

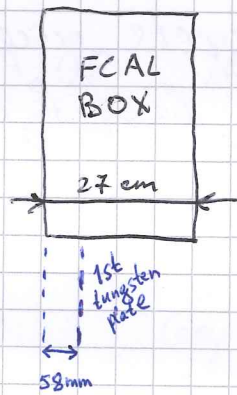
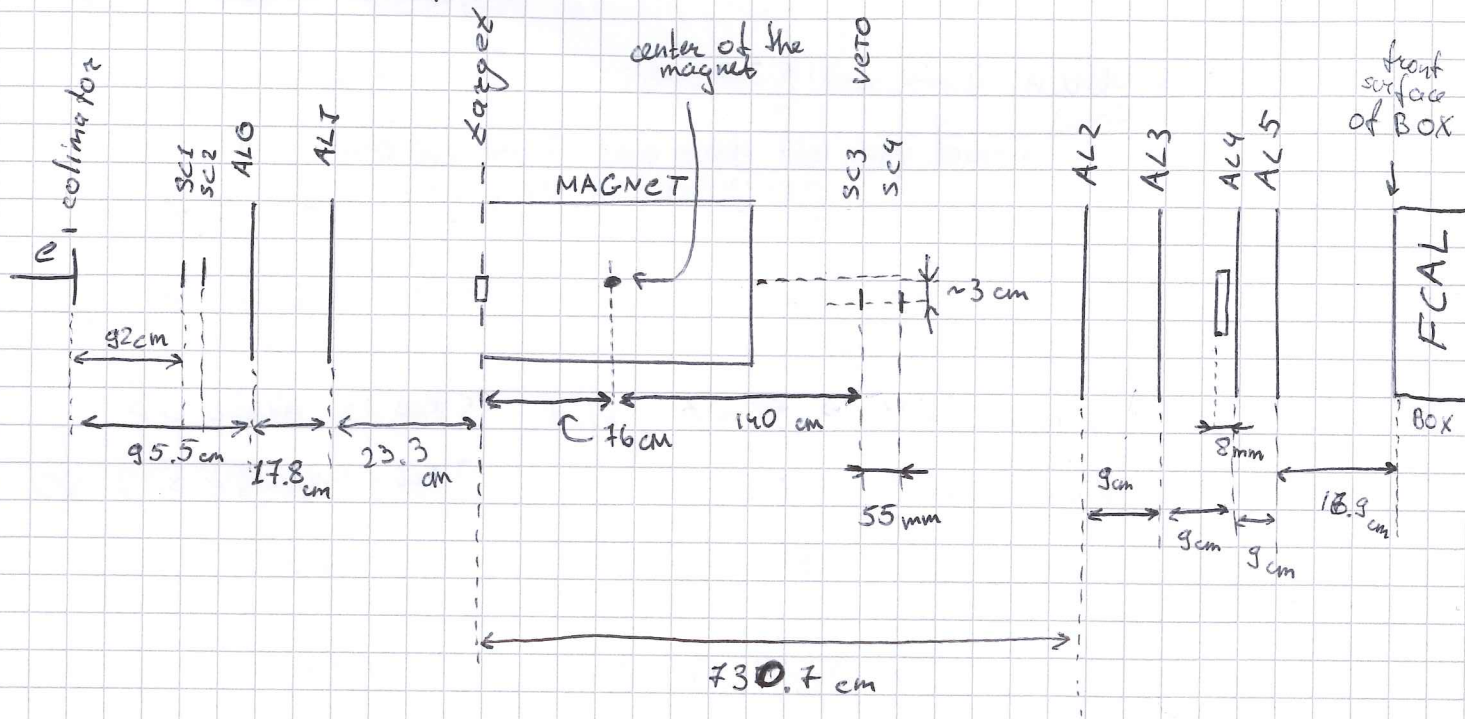
Run 280 SRS 73655

Rate 33Hz.

19:45 Run 1531 TLU 67362

281 SRS 68038

Experimental Setup



14.03.2020 (5:36)
JT-day

20:26 Run 1533 TLU
282 SRS 81737

21:09 Run 1535 TLU
ALPIDE 3 0 events,
not started,
Run 283 SRS stopped.

21:13 Run 1536 TLU 108294
Run 284 SRS 109416

22:14 Run 1540 TLU 93842
Run 286 SRS 94798

23:05 Run 1541 TLU 50972
Run 287 SRS 51536

23:36 Run 288 Pedestal SRS 4761

23:39 Run 1542 TLU 1086396
Run 289 SRS 1097811
overnight run.

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09:53 Run 1543 TLU
Run 290 SRS

15.03.2020 Beam off TB-2020 is over.