26/ Feb. / 05

13:19	Run 8952	Pedestal, circulation pump on
13:21	Run 8953	LED, circulation pump on
13:27	Run 8954	α, circulation pump on (15h47m) λ_{abs} = 110.8cm
14:21	Run 8955	α, 〃 (16h41m) λ_{abs} = 125.5cm
15:26	Run 8956	α, 〃 λ_{abs} = 118.1cm
16:21	Run 8957	α, 〃 λ_{abs} = 119.9 cm
17:26	Run 8958	α, 〃 λ_{abs} = 120.5

Increased threshold of Discriminator 0
from ~~0.175~~ 95 mV to ~~1.25~~ 125 mV

18:17	#8959	α	106.8 cm
19:33	#8960	α	111 cm
20:53	#8961	α	107.1 cm
21:12	#8962	pedestal	
21:14	#8963	LED	(Junk)

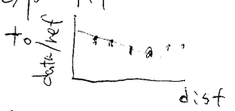
New steering parameters of ROME Task XeAlphaFis was introduced.

These parameters can be changed with editing "romeConfig.xml"

InLiquid : switch Liquid / Gas

CircleFit : switch whether circle fit ~~will be~~ is done.

AbsorptionLengthFit / Min, Max : range of expo fit



Y, Z : center of α rings. these values will be used if CircleFit is false

P.S. there is a switch to enable/disable Canvas drawing.

Calibration file updated

22:13	#8964	α	96.9 cm
23:26	#8965	LED	
23:40	Stop liquid phase circulation		

- close valves between chamber and purification line. (getter)
- keep opening valves between chamber and liquid pump cartridge

Calibration file updated (only pedestal)

23:44	#8966	α	98.44 cm
	#8967	pedestal	
27/Feb/2005 1:05	#8968	α (after ~1 hour from pump stopped).	λ_{abs} = 92.06 cm.
3:00	#8969	α run, after 3 hours from pump stopped.	λ_{abs} = 95.3 cm.
4:00	#8970	α run after 4 hours from pump stopped.	λ_{abs} = 99.16 cm.
5:00	#8971	α run, after 5 hours from pump stopped.	λ_{abs} = 99.12 cm.
6:00	#8972	α run = after 6 hours from pump stopped,	λ_{abs} = 95.21 cm.

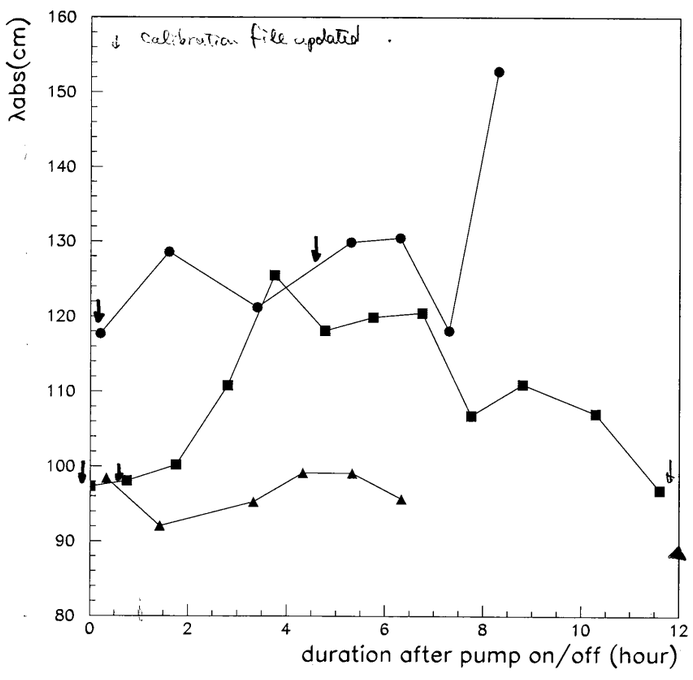
27/02/2005.

6:13 RUN #8973. pedestal run.

RUN #8974. LED calibration run.

6:23 RUN #8975. Cosmic Ray. triggered by TCs.
@ pump off.

■ TOTAL PLOT @ YESTERDAY and THIS MORNING.



RUN #8937
?
RUN #8922.

●—● : yesterday morning.
(pump ON).
RUN 8932 ~ 8945 (≈8 hour).

■—■ : yesterday daytime.
(PUMP ON).
RUN 8950 ~ 8964.

▲—▲ : this morning
(PUMP OFF).
RUN 8966 ~ 8922.

- According to, yesterday morning's data (●), λabs continued to grow.
- According to, yesterday daytime's data (■), λabs continued to grow by ~4 hours, but it looks like saturated (???) and after 2 hours, it continued to grow down.
- According to pump off data (▲), it looks like there're no time evolution.

- Now, the value b/w LP and liquid pump cartridge are closed. not.
so this cartridge has not affected the λ abs.
- $\langle \lambda_{abs} \rangle_{(pump\ off)}$ = 96.63 cm. (±2.56 cm. RMS)
#8966 ~ #8922.
This is current offset of absorption length.

7:48 #8925, paused. due to check the trigger logic and TDC timing because TDC distribution is strange @ LPmonitor.
TDC entry of telescope is stored by only TC2-bottom. why?
I checked trigger logic and delay timing.
But it seems correct, no problem....

8:33 #8925 resumed.

8:51 #8925. (cosmic). Stopped.

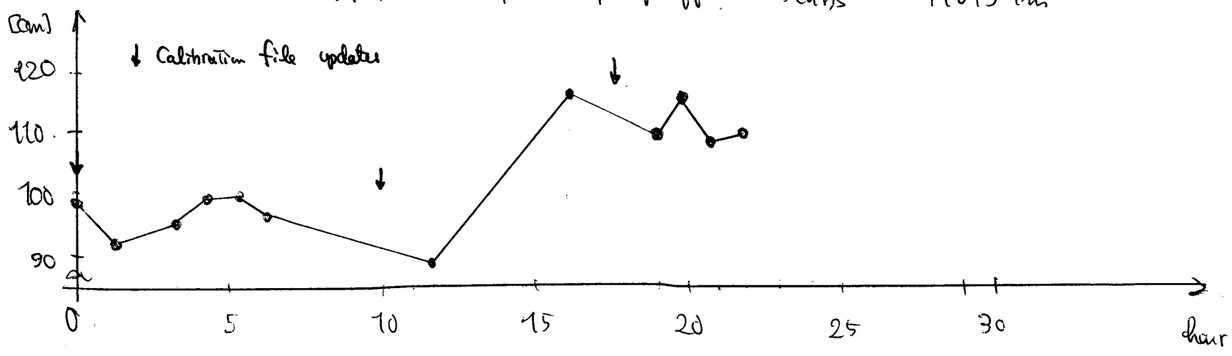
8:52 #8976. pedestal. @ pump off.

8:53 #8922. LED @ pump off. Calibration file updated

11:18 #8978 α, pumpoff λ_{abs} = 89.0 cm

12:35 MSCB Access Error
- LabVIEW restarted
- MSCB Crate rebooted

15:49 #8979 α pump off λ_{abs} = 116.5 cm



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15:56 #8980 CR

18:29 Stop the Run 291 events

18:30 #8981 pedestal

18:31 #8982 LED

Calibration file updated

18:37 #8983 α λ_{abs} = 110.0 cm

19:27 #8984 α λ_{abs} = 115.8 cm

20:27 #8985 α λ_{abs} = 108.2 cm

21:27 #8986 α λ_{abs} = 110.5 cm

21:45 Liq. Pump started cartridge temp −75°C

21:51 reached 53 Hz (53.09 Hz) " −92°C

Pressure Range Setting 0.147 - 0.150 MPa

21:53 Purifier pressure reached ~0.27 MPa

21:56 −96°C

22:06 −97°C

22:02 #8987 Junk RUN

22:02 #8988 α λ_{abs} = 116.1 cm

22:11 Pressure Range Setting 0.147 - 0.152 MPa

22:12 cartridge temp −99°C

22:08 #8989 Pedestal

22:10 #8990 LED

22:16 #8991 α again λ_{abs} = 111.9 cm

Please continue this circulation for at least 24 hours!

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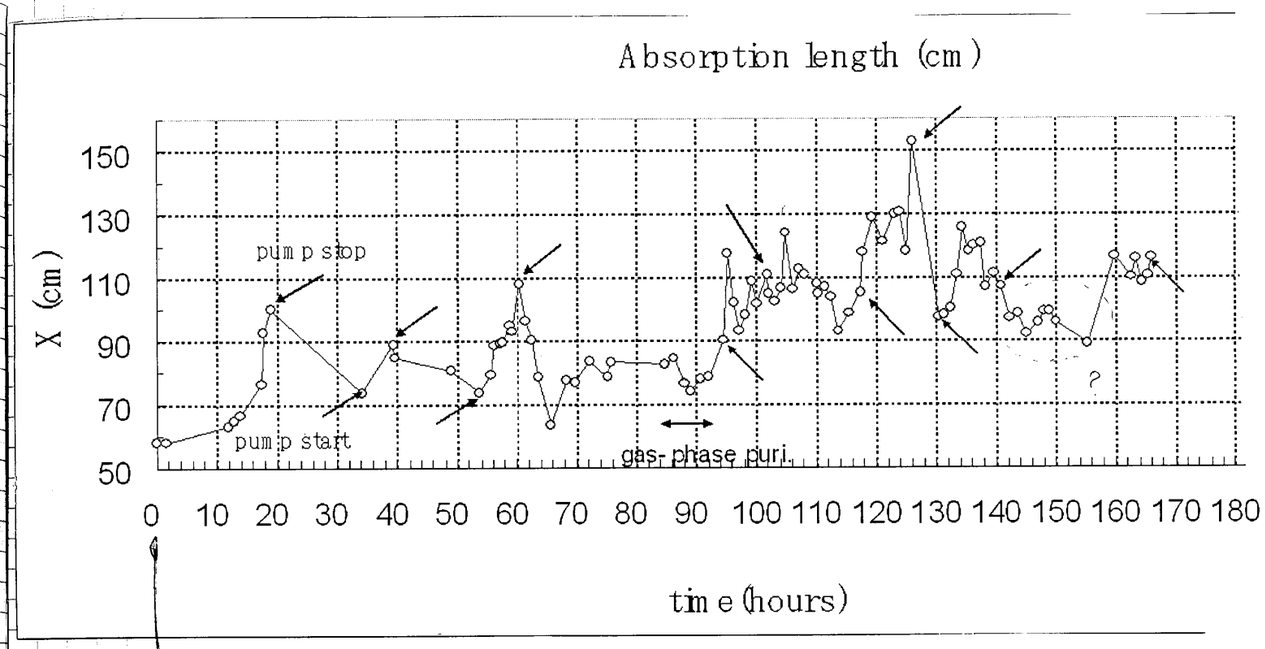


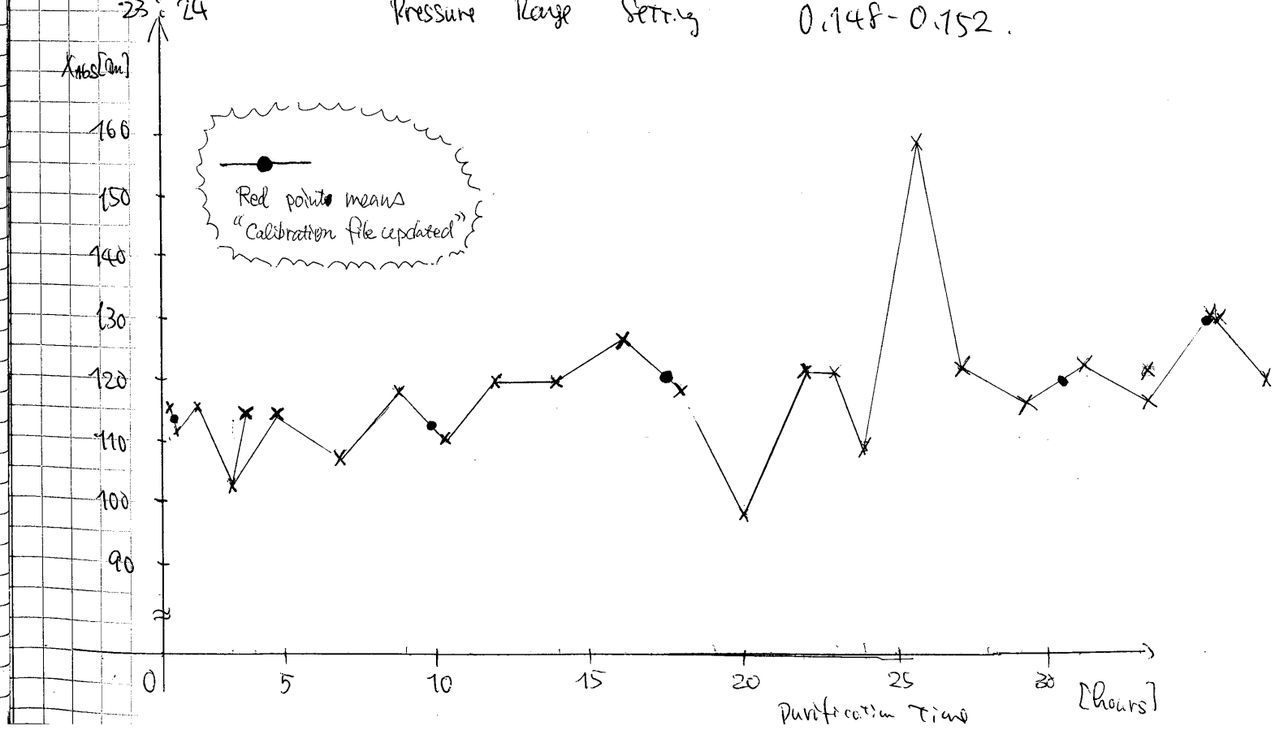
21/Feb/05

0:00

23:03 #8992 α. λ_{abs} = 115.8 cm

23:13 #8993 CR stopped at 0:04 91 events

23:24 Pressure Range Setting 0.148 - 0.152.



28/Feb/05

0:04 #8994 α λ_{abs} = 103.8

0:11 #8995 CR

2:02 #8996. stop.

#8996. α. λ_{abs} = 114.4 cm.

2:10 #8997. CR.

4:00 #8997 stop.

#8998 α. λ_{abs} = 102.0 cm.

#8999 CR.

6:00 #8999 stop.

#9000 α. λ_{abs} = 112.4 cm

#9001. CR.

7:40 #9001 stop.

#9002. pedestal.

#9003. LED.

8:00 #9004. Alpha @ pump ON. (~10 hours).
λ_{abs} = 109.9 cm.

8:08 #9005. CR.

9:51 #9005. stop.

9:52 #9006 Alpha @ ~12 hours. λ_{abs} = 119.1 cm

10:00 #9007. CR @ pump on.

11:45 #9008. Alpha @ ~14 hours. λ_{abs} = 119.2 cm

01/03/05

28/02/05

#9009.

11:51 CR @ pump on (~14 hours).

14:00 #9010 α ~16h λ_{abs} = 126.2 cm

14:07 #9011 CR pump on

15:46 #9012 pedestal pump on

15:48 #9013 LED pump on

15:53 #9014 α ~18h λ_{abs} = 128.1 cm

40:25 #9015 LED pump on

16:41 #9016 CR

17:49 end 104 events

17:49 #9017 alpha ~20

17:57 #9018 CR λ_{abs} = 97.72 cm

19:43 end 175 events

19:44 #9019 α ~22 hours after pump started

19:50 #9020 CR 103 events λ_{abs} = 121 cm

20:45 #9021 α λ_{abs} = 120.5 cm

20:52 #9022 CR

21:44 #9023 α λ_{abs} = 109.2 cm

21:58 #9024 pedestal

21:59 #9025 LED

= calibration change

23:30 #9026 α λ_{abs} = 157.7 (ped #9012, LED #9013)

0:59 #9027 α (Using this, λ<0) using #9012, #9013, λ~100 λ_{abs} = 121.9 cm (

2:58 #9028 ~~CR~~ α λ = 115.7 (ped. LED: #9012, 9013)

#9029 CR 123.6 (ped. LED: #9030, 9031)

4:19 #9029 stop

#9030 pedestal

#9031 LED

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5:00 #9032 α λ_{abs} = 122.5 cm

#9033 CR

7:00 end 196 events

#9034 α λ_{abs} = 116.6 cm

#9035 CR 227 ev.

9:07 #9036 pedestal

9:10 #9037 LED

9:17 #9038 alpha @ pump ON (~ 35 hours)

9:27 #9039 CR λ_{abs} = 129.8 cm

~140ev.

SC frontend restarted. because of the message

"Error reading MSCB bus".

10:53 #9040 alpha λ_{abs} = 119.5 cm

11:10 #9041 CR

14:54 #9042 pedestal

14:57 #9043 LED

15:01 #9044 alpha λ_{abs} = 104.9 cm

15:11 #9045 CR

17:01 #9046 alpha λ_{abs} = 112.4cm

17:07 #9047 CR

17:26 CE tank G100 ℓ LN_2

18:58 #9048 alpha λ_{abs} = 72.21cm (91.48cm)

19:05 #9049 CR

↑ Something wrong!?

Take once more

1/Mar/05

20:06 #9050 alpha. λ_{abs} ≈ 90 cm.....

Too short

Take calibration data again

20:53 #9051 pedestal

20:54 #9052 LED

21:03 #9053 α λ_{abs} = 25.9cm !?

HV trouble. when I realized the trouble

~~21~~:20 HV off.
22

- Network access was impossible
- Monitor was black even if I pushed button.
- Light corresponding slot { 0, 2 - off / 1, 3 - on
- I couldn't turn off HV when I changed mode to local and ~~push~~ pressed "HV off" button.

So I pressed "Panic off" button and turned key to off

Midas message

17:29 Connection broken to LRS1454 from SC frontend

After that HV02 became unable to start.

Then I cleaned ~~it~~ inside with air flow but it didn't work.

I ~~can't~~ decided to continue data acquisition tonight. and begang to fix problem tomorrow.

23:32 #9055 pedestal without hv02

23:33 #9056 LED "

23:40 #9057 α "

2/Mar/05

01:45 #9058 α "

#9059 ← Just hv01 was powered off

2/Mar/05

8:38	#9060	pedestal	HV 02 off.
8:40	#9061	LED	〃
8:46	#9062	alpha	〃
9:02	#9063	CR	〃

9:10 MSCB Access error. → reboot

19:40 HV 02 recovered HV on

20:40	#9067	pedestal	
20:41	#9068	LED	
20:47	#9069	α	
21:27	#9070	LED	Junk
21:28	#9071	LED	

No signal (@ADC data) PMT

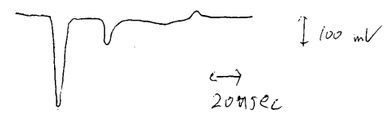
		HV#
F23	No signal at input of splitter	1-3-4
F24		1-2-8
F35		1-3-2
F34		1-3-1
F6		1-2-5
F0		1-2-4
T40	Signal at output of splitter O.K.	
Bk33		
Bk34		
BT37		
Bk31		
Bk23	BNC connecter to splitter input was broken (To be repaired)	

replaced ADC mini card for Bk33. Bk34. BT37. Bk31, T40

⇓

ADC count O.K.

F23 supply 1100 V from HV02-0-0, LED on
77μA strange signal (at input of splitter)



it seems like cross talk but ~~is~~ too high.

Bleeder circuit might be broken

F24 ~~No signal~~ same as F23
F35 〃
F34 Same as F23 but smaller signal
F6 Same as F23
F0 〃

BNC Connecter of Bk 23 was repaired

Summary

- Strange signal PMTs F23. F24. F35. F34. F6, F0
  Probably, circuit was broken when HV trouble occured.
  ↳ See next to next page.
- ADC mini cards T40 Bk33 Bk34 BT37 Bk31 ⇒ (Fixed)
- BNC connector Bk23 ⇒ (Fixed)

22:41	#9072	LED
22:44	#9073	〃
03/Mar/2005 0:02	#9074	α
0:03	#9075	α
0:26	#9076	CR
1:19	#9077	pedestal
1:20	#9078	LED

→ see next page

~~04~~/Mar/2005

1:36 #9079 ~~c~~CR

2:00 #9080 ~~B~~ α

#9081 CR

4:00 #9082 α

#9083 CR

6:00 #9084 α

8:00 all HV had been off. → reload 050220-2.hv file.
since #9072 ??

8:20 #9085 pedestal

8:22 #9086 LED

8:31 #9087 alpha

8:39 #9088 CR ⟶ 0 events

Burndy SG-16 disconnected !! → fixed.

9:01 #9089 pedestal

9:03 #9090 LED

9:09 #9091 alpha. λ_{abs}=123.7 cm.

9:17 #9092 CR ⟶ 1 events.

trigger cable for CR disconnected → fixed

9:35 #9093 alpha. λ_{abs} = 119.3 cm

9:44 #9094 CR. 37 events.

10:08 #9095 alpha. λ_{abs} = 114.5 cm

03/Mar/2005

10:22 #9096 pedestal

10:24 #9097 LED

10:33 #9098 alpha. λ_{abs} = 133.8cm

10:41 #9099 CR

11:51 #9100 alpha. λ_{abs} = 130.7 cm.

11:59 #9101 pedestal.

12:00 #9102 LED

12:09 #9103 alpha. λ_{abs} = 128.6cm

12:18 #9104 CR

13:01 #9105 alpha. λ_{abs} = 139.2cm

14:11 #9106 pedestal

14:13 #9107 LED

14:20 #9108 alpha. λ_{abs} = 130.1 cm.

14:29 #9109 CR

Signal cables at feed through almost disconnected. (#4 board)
L19, L22, L23, T19, T23, R22, R23, BT19, BT22, BT23 no signal.
→ fixed.
at the same time, F23, F29, F35, F34, F16, F0 seems O.K.

~~15:~~

15:24 #9110 pedestal

15:27 #9111 LED

15:34 #9112 alpha. λ_{abs} = 117.1cm

15:42 #9113 CR

17:38 #9114 pedestal

17:39 #9115 α λ_{abs} = 107.5 cm

18:54 #9116 α λ_{abs} = 112.8cm

pressure control setting 1.46 → 1.49 $\times 10^{-1}$ Mpa
1.50 → 1.53

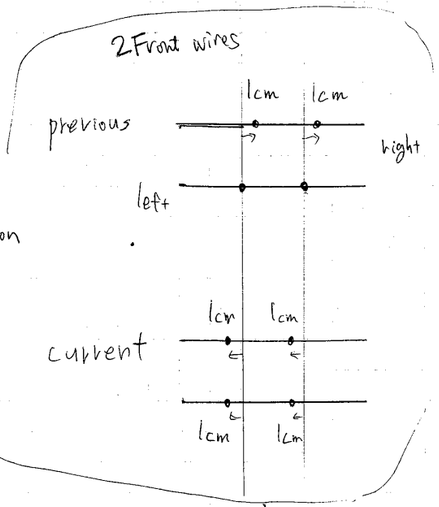
03/Mar/2005

19:52	#9117	α	λ_{abs} = 106.9 cm
21:35	#9118	α	λ_{abs} = 111.9 cm
23:01	#9119	α	λ_{abs} = 111.9 cm

04/Mar/2005

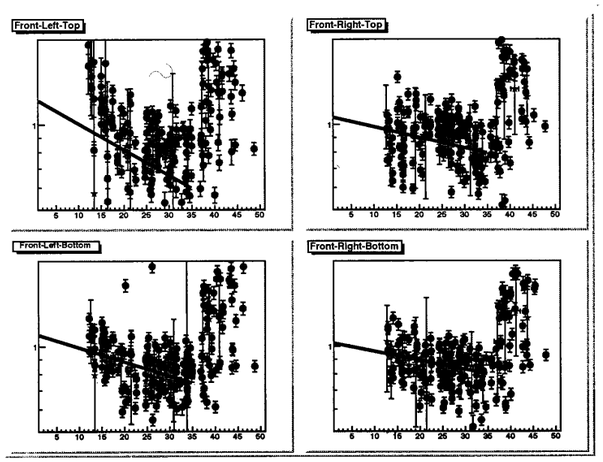
0:01	#9120	pedestal
0:01	#9121	LED
0:30	#9122	α

λ_{abs} = 116.3 cm



Analysis of #9108 with various correction for each α source

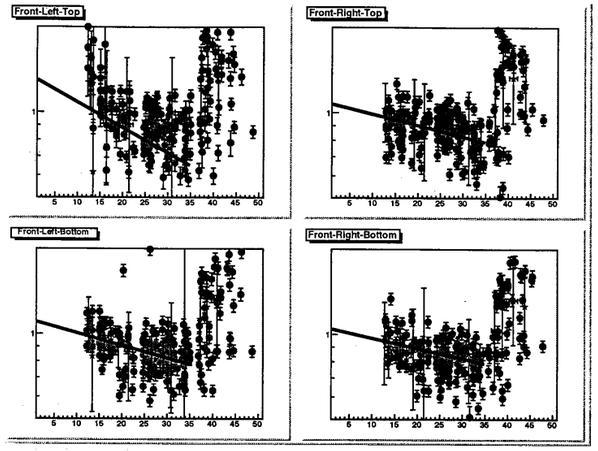
data/~~#4~~#8528 w/o correction



48 117
87 137 cm

this analysis code can be used under lpframwork.new which shows existing plot too. "ほぼの currently, reference is MC

data/#8528

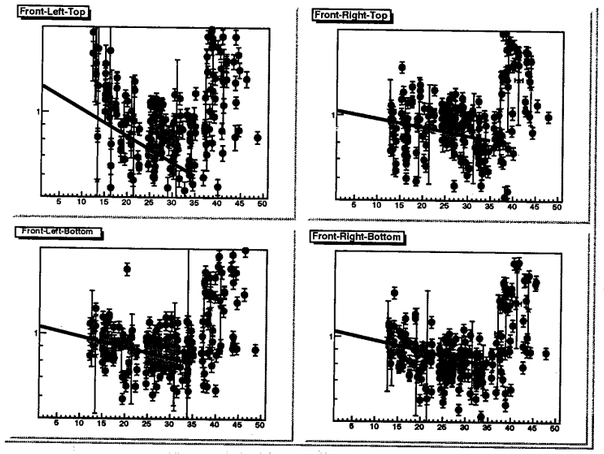


~~47.6 87.4~~
~~87.1 136.6 cm~~
49 109
98 120 cm

Corrected with

$\left(\frac{\text{distance}}{\cos(\theta)}\right)$ from source

data/#8528 corrected with correctionfactor

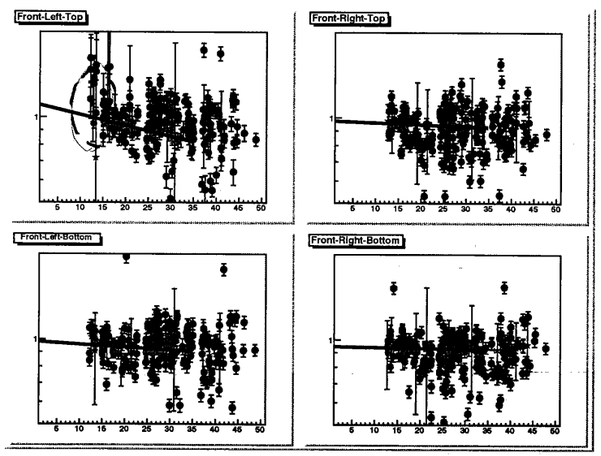


47 145
115 124 cm

Correction factor was estimated from

MC(current α position) ÷ MC(former α position)

data/MC



112 647
435 1266 cm

From this result, assumed poisition may not be correct.

04/Mar./2005

2:00 #9123 α $\lambda_{abs} = 110.6$ cm

4:12 #9124 α $\lambda_{abs} = 104.0$ cm

6:00 #9125 α $\lambda_{abs} = 93.61$ cm ← During this Run Message: Connection broken to LRS1454 LRS1454 doesn't respond

7:10 #9126 α $\lambda_{abs} = 121$ cm

7:56 #9127 pedestal

7:58 #9128 LED

8:03 #9129 α $\lambda_{abs} = 119.6$ cm

daqframe work hanged up. All operation on megonline1 impossible. Megonline1 was rebooted manually.

8:46 megonline1 recovered

8:46 #9130 CR

Seems to work.

10:01 #9131 α $\lambda_{abs} = 128.2$ cm

10:08 #9132 CR

12:07 #9133 α $\lambda_{abs} = 125.1$ cm

12:16 #9134 CR

14:00 Slow Control was found to be stopped. Restarted

14:03 #9135 α

Stopped intermediate because of SC hanged

14:09 #9136 α Restarted ↓ failed due to megonline1 hang up.

04/Mar/2005

megonline1 rebooted manually.

14:52 #9136 again α.

After several iterations, pressure range setting is determined to be 0.149 ~ 0.153 MPa for stable liquid circulation

17:03 ~~pressure was 1.51 ~ 1.56~~

17:21 • Pressure control range 1.53 - 1.56 $\times 10^{-1}$ Mpa
• changed interval of reading MSCB and control LN_2 valve from 1 sec to 200 msec.
Now circulation pump is stable.

17:24 Get Pressure control range back (0.149 - 0.153 MPa)
It seems o.k.

17:25 #9137 pedestal

#9138 LED

17:40 #9139 α 133.6 cm

decreased MIM Discriminator level for sum out of Discriminator 0 (front top left α) from 125 to 75 mV

18:27 #9140 α 129.8 cm

18:57 #9141 α 153.3 cm

This is for removing possible trigger bias which is thought to cause "excess" in short distance range of Front-Left-Top histogram.

19:05 Stop liquid phase circulation

19:12 start gas phase circulation

pressure range 0.132 - 0.136 MPa

Flow rate ~ 7.2~8.3 ℓ/min gas

19:57 #9142 α 111.5cm

21:07 #9143 α Junk. 141.3 cm

megaonline kernel panic during #9143

21:21 #9144 α 113.7 cm

~~21:50~~ #9145 α 110.1 cm

#9146 Junk

23:38 #9147 α 114.2 cm

05/Mar./05 (Sat.)

1:30 #9148 α 118 cm

3:27 #9149 pedestal Junk.) connection broken to "SC Frontend"

#9150 LED Junk.) " to "LRS1454"

3:35 #9151 pedestal Junk

SCFrontend started
but soon stopped
I tried again & again..

05/Mar/05

I found LabVIEW frozen, forced termination and restart. but. it ~~does~~ not respond.
so, reboot MSCB. → Ok.

start SCFrontend → Ok.

since 3:06, LabVIEW have been frozen
3:07 SCFrontend was stopped.

~~4:03~~ restart LabVIEW Run.
inner press. ~~began~~ up to 026MPa.
now flow rate is 0

4:17 #9152 Pedestal
4:18 #9153 LED
4:31 #9154 α λabs = 105.7 cm
5:38 #9155 α λabs = 114.8 cm
7:00 #9156 α λabs = 121.8 cm

7:30. Gas phase circulation pump restart.
Flow rate 8.3 ~ 8. ℓ/min

(pump ~~off~~ has been off since the slow controll trouble

~~7:47~~ #9157 CR
9:16. #9158 α. λobs = 106.6cm
9:24 #9159 pedestal
9:26 #9160 LED
9:32 #9161 CR

No data in CR. trigger ??? From when?
Stop this RUN and try to take
CR. self trigger.

05/Mar/05

11:44. CR trigger was changed from Counter-trigger to self-Trigger

11:41. #9162 CR (self) Ok. data is in. Probably timing is incorrect in CR-counter trigger.

12:56. #9163 α. λabs = 106.2cm

Check the COSMIC RAY TRIGGER counter timing.
→ Timing seems to be Ok. (ADC timing)

13:50 #9164 CR
Trigger by upper trigger counters.

⇨ Found that TDC inputs of TC2 up & down are swapped ← fixed.

14:07 #9165 CR
Trigger by lower trigger counters

14:12 #9166 CR
Trigger by TC2 lower.

14:22 #9167 CR
trigger by TC2 upper

14:33 #9168 CR
trigger by TC1 upper

14:56 #9169 CR
trigger by TC1 lower

15:06 #9170 CR
trigger by TC3 upper

15:13 #9171 CR
trigger by TC3 lower

05/Mar/05

15:20 #9172. α. Data quality seems to be bad ? because we cannot see clear rings.

Take calibration data again and then α.

15:23 #9173 pedestal

15:25 #9174 LED

15:38 #9175 α. again λabs = 102.3cm.

Now CR trigger is fired by TRIGGER Counters.

16:07. #9176. CR

FROM online histograms in RUN #9166~9177, the counters are working more or less. although some of them are very noisy.
The threshold levels seem to be rather low, resulting in quite many random coincidence fake trigger... Please be careful when you look at the data.

16:30 AmBe Source in use in front of the detector

17:32 #9177 α λabs = 99.36 cm

17:43 #9178 CR

19:25 #9179 α λabs = 85.99 cm

05/Mar/05

19:32 #9180 CR

21:40 #9181 α λ_{abs} = 89.07 cm

21:47 #9182 CR

23:08 #9183 α λ_{abs} = 104.3 cm

23:15 #9184 CR

06/Mar./2005, (Sun.)

0:48 #9185 pedestal

0:50 #9186 LED

1:00 #9187 α λ_{abs} = 110.1 cm

2:04 #9188 CR

3:00 #9189 α λ_{abs} = 112.6 cm

3:08 #9190 CR

5:02 #9191 α λ_{abs} = 114.4 cm

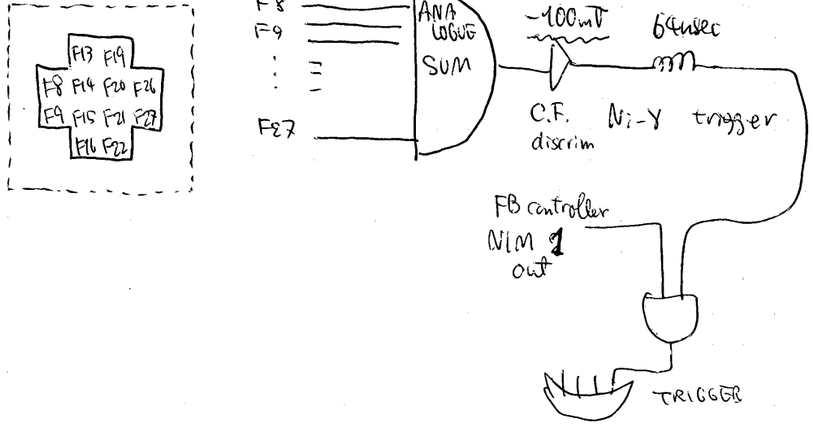
5:33 #9192 CR

7:00 #9193 α λ_{abs} = 115.7 cm

7:11 #9194 CR

9:59 cancel of #9194

Implement gamma trigger for Ni - γ. by using central 12 PMTs on the front face.



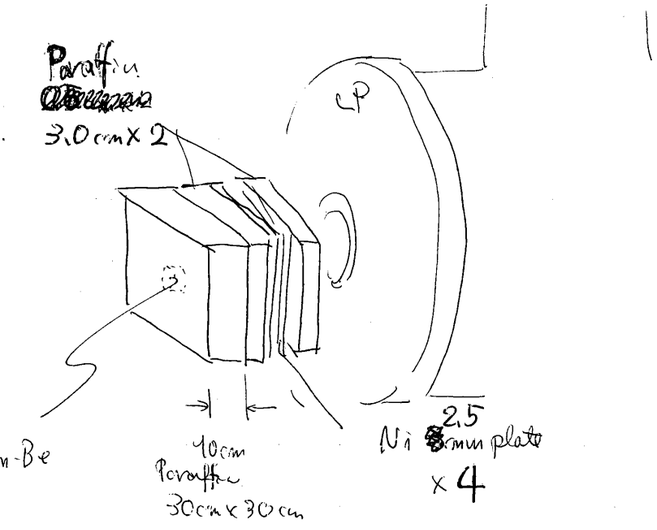
06/Mar/05

11:03 #9195 α mistake in trigger

Bad data

11:08 #9196 α λ_{abs} = 129.7 cm

- Am-Be source in front of the LP
- Window cover of the LP removed



11:23 #9197 γ trigger for Ni-γ w/ Am-Be/Ni

11:59 #9198 γ trigger w/o Am-Be/Ni

Analogue SUM. changed. Now Only using F14, F15, F20 and F21

12:22 #9199 γ Trigger w/ Am-Be/Ni

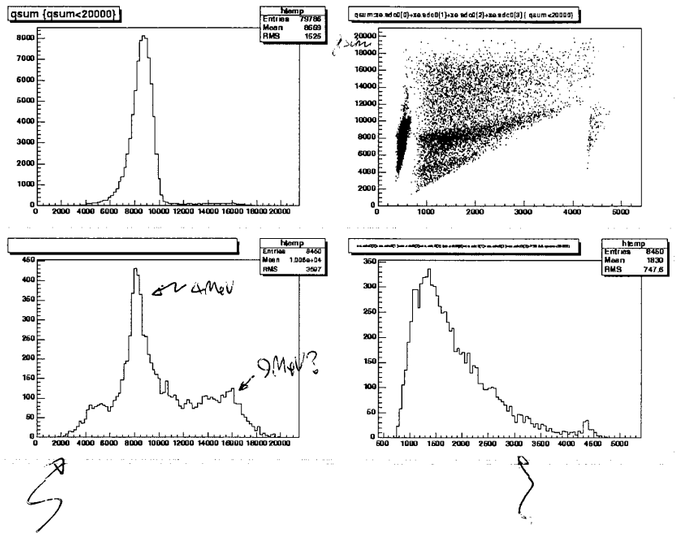
12:40 #9200 Pedestal.

12:41 #9201 LED

12:53 #9202 CR

11:28 #9203 α $\lambda_{abs} = 735.6$ cm

Analysis #9199



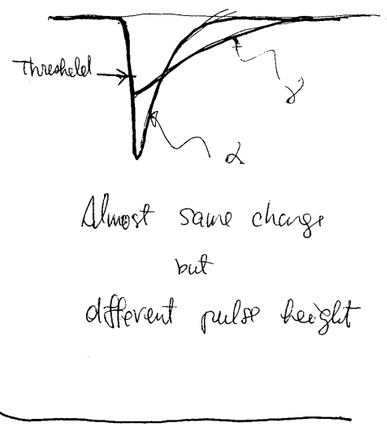
qsum VS

ADC0(F14)
+ ADC0(F15)
+ ADC0(F20)
+ ADC0(F21)

qsum.

adcϕ(F14) + ····· + adcϕ(F21)

adcϕ(F14) + ·· adcϕ(F21) > 750 0



Almost same charge but different pulse height

15:06 #9204

γ trigger w/ Am-Be | Ni

Triggered by central 4PMTs.

F14, F15, F20, F21

16:30 Ni plates 2.5mmt x4 removed

16:34 #9205

γ trigger w/ Am-Be && w/o Ni plates

17:45 Run 9205 stopped after 237657 events.

Due to a problem with the data logger this file may be corrupted. Hence we started a new identical run

#9206 w/ Am Be w/o Ni Plates

18:45 " stopped

20 km/sec SOURCE

#9207 Pedestal 5k events

#9208 LED Calibration

#9209 AmBe + 1 cm Nickel

19:45 " stopped after 900k events

20:10 #9210 α

20:18 #9211 CR

22:03 #9212 α $\lambda_{abs} = 103.7$ cm

22:09 #9213 CR

07/March/2005

0:05 #9214 pedestal

0:08 #9215 LED

0:17 #9216 alpha $\lambda_{abs} = 110.4$ cm

0:27 #9217 CR

2:04 #9218 alpha $\lambda_{abs} = 106$ cm

2:13 #9219 CR

4:20 megonlnol hang up → reboot

07/ March/2005

4:30 #9220 pedestal
4:32 #9221 LED
4:44 #9222 alpha. λ_{abs} = 87 cm.
5:10 #9223 CR.
6:06 #9224 alpha λ_{abs} = 97.71 cm
SC frontend was abnormally stopped. → restarted.

6:14 #9225 alpha. λ_{abs} = 98.7 cm

MSCB frozen. → restarted.
circulation pump is not working. too hot? flow rate ~0
→ fixed by Ryu.
AC100V voltage shortage → line rearranged.

7:45 #9226 CR.
8:07 #9227 pedestal
8:09 #9228 LED.
8:15 #9229 α λ_{abs} = 91.7 cm
8:31 #9230 CR
10:45 stopped
#9231 Pedestal
#9232 LED

- We increased the discrimination threshold on the linear sum of the front 4 central PMTs in order to get rid of the α-background
- we use the 2kn/sec source (Health core people took the high intensity one)

#9233 low intensity AmBe source, nickel plate present

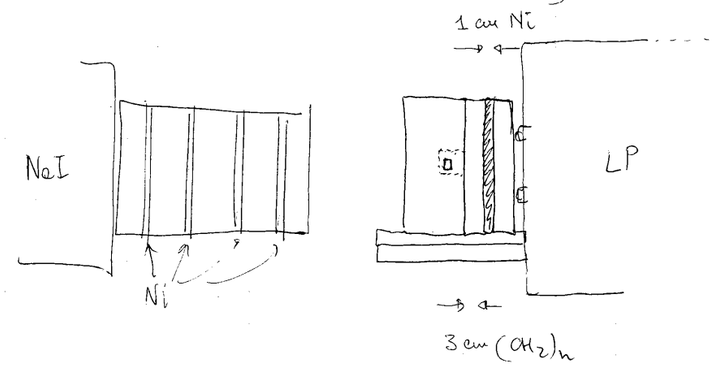


fig 1

12:00 Run stopped ~ 60 k events

#9234 same as run 9233 BUT W/O NICKEL

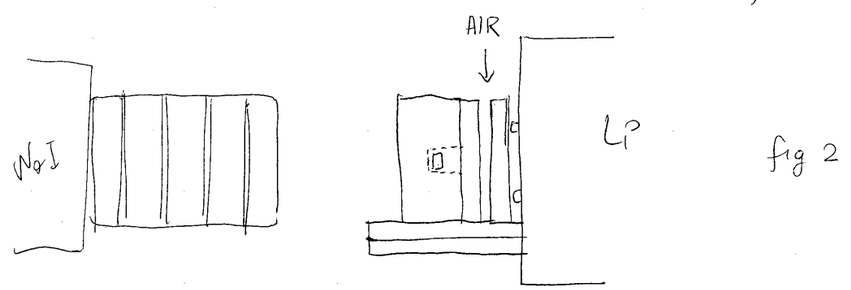


fig 2

13:35 RUN 9234 stopped ~ 88k events

RUN 9235 SAME AS 9234 But with high intensity source

14:35 // stopped.

Removed the nickel in front of NaI.

1440 RUN 9236 same as 9235 (Am/Be HIGH Int. NO NICKEL)

15:40 stopped run 9236 @ 100k events.

RUN 9236 Am/Be high intensity with 1 cm nickel plate (see fig 1 without Nickel on NaI)

16:50 Run 9237 stopped ~100k events

17:30 # 9238 same as 9237

18:35 " stopped

9239 same as run 9236 (Am/Be high No nickel)

19:20 Lab view frozen
SC Frontend stoped.
↑
~19:40 I found it at ~19:40 . so
Reboot MsCB → ok.
Restart LabView → ok.
Start SC Front End → ok.
9239 Stop

19:52	# 9240	α	$\lambda_{abs} = 107.6$ cm
19:59	# 9241	CR	
22:01	# 9242	α	$\lambda_{abs} = 105.6$ cm
22:09	# 9243	CR	

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0:13	#9244	pedestal	
0:14	#9245	LED	
0:25	#9246	alpha	$\lambda_{abs} = 104.2$ cm
0:35	#9247	CR	
2:19	# 9248	alpha	$\lambda_{abs} = 108.6$ cm
2:29	#9249	CR	

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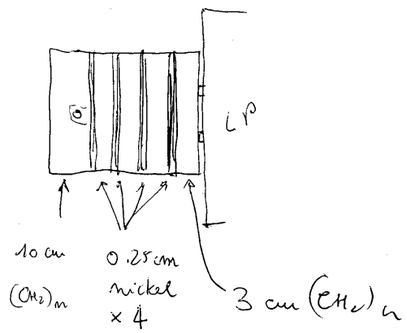
4:15	# 9250	pedestal	
4:17	# 9251	LED	
4:23	# 9252	alpha	$\lambda_{abs} = 105$ cm
4:31	# 9253	CR	
6:18	# 9254	alpha	$\lambda_{abs} = 95.7$ cm
6:30	# 9255	CR	
9.30	# "	stopped	
9.30	# 9256	pedestal run	
	# 9254	LED calibration run	
	# 9258	LP Am/Be w/ nickel in this config:	



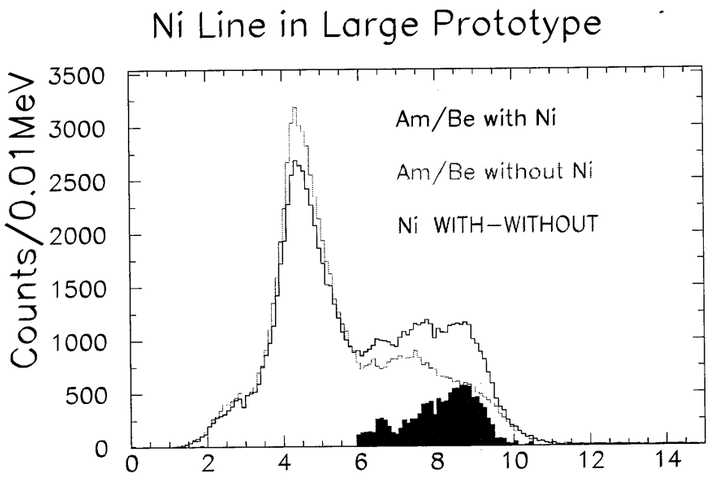
This is the configuration that with the NaI gives the best resolution.

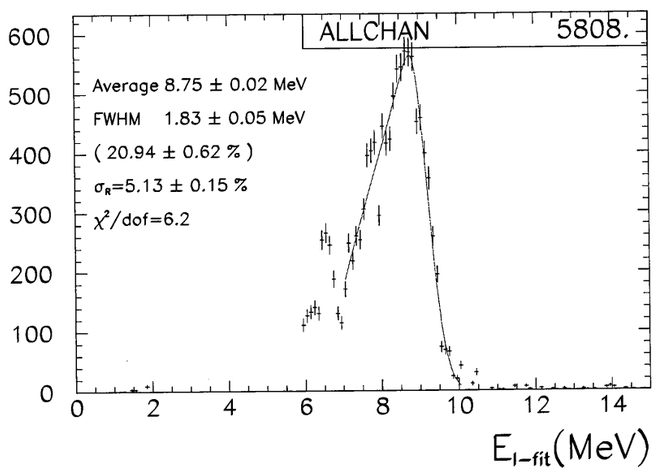
10:35 stopped

10:48 # 9259 LP Am/Be w/o nickel (normalization for 9258)

2:00 " Stopped.

RUNS 9236/7/8/9





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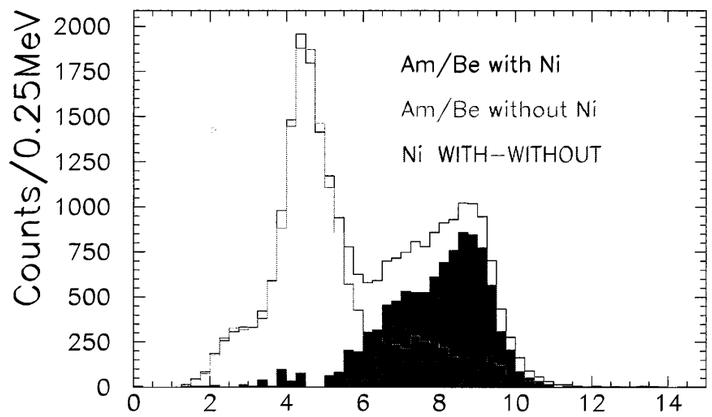
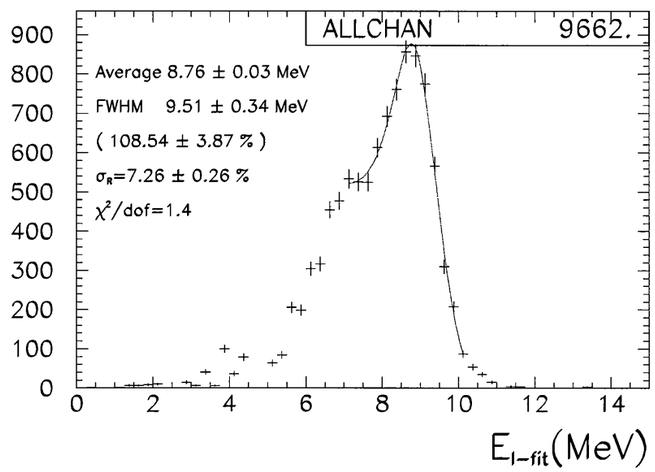
12:18 #9260 pedestal

12:21 #9261 LED

12:36 #9262 α $\lambda_{abs} = 11.9$ cm

RUNS 9258/9259





8/Mar/2005

14:15 #9264 pedestal
14::16 #9265 α λabs = 77.63

14:40 start liquid phase circulation

adjustment pressure setting
0.139 - 0.142 MPa

16:14 #9266 Pedestal circulation liquid pump on
16:15 #9267 LED
16:21 #9268 α λabs = 97.5 cm
16:29 #9269 CR
18:39 #9270 α λabs = 113.7 cm
18:47 #9271 CR
20:29 #9272 α λabs = 123.8 cm
20:37 #9273 CR
22:32 #9274 α λabs = 128.3 cm
22:40 #9275 CR

9/Mar./2005 (Wed)
00:22 #9276 α
00:29 #9277 CR λabs = 135.6 cm

2:13 #9278 pedestal
2:16 #9279 LED
2:27 #9280 alpha λabs = 116 cm

2:52 MSCB error → reboot MSCB

#9281
3:20 pedestal test
3:59 alpha λabs = 133.0 cm
#9282

4:26 #9283 CR

6:29 #9284 alpha λabs = 131.5 cm.

CR ADC, TDC gate & timing re-checked.
Everything seems o.k. After that, on-line histogram is also o.k.

7:25 #9285 CR.

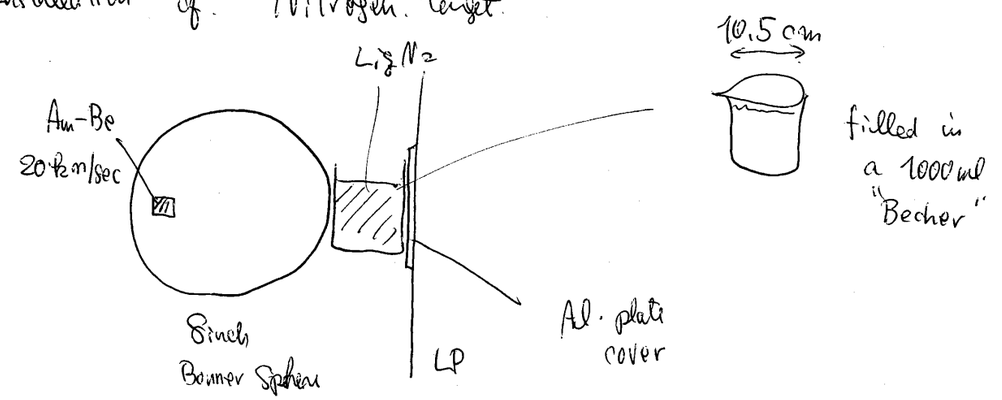
8:19 Stop 9285

8:19 #9286 α λabs = 136.5 cm
8:30 Stop liquid phase circulation

pressure control range. 1.28 - 1.33 x10⁻¹ MPa

10:01 #9287 pedestal
10:06 #9288 LED
10:12 #9289 α λabs = 117.8 cm

Installation of Nitrogen target



9/Mar/05

10:46 #9290 AmBe

(Front 4PMT Sum th = 100 mV
Boner sphere d = 5inch

11:45 #9291 AmBe

(4PMT Sum th = 150 mV
Boner sphere d = 8 inch

changed dewer from normal (maybe sus) to plastic (r0.5cmϕ) beaker

Bonner Sphere 8inch → 5inch

12:12 #9292 AmBe
#9293 crashed logger

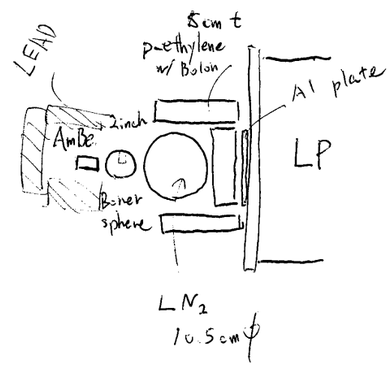
14:45 #9294 AmBe 5inch sphere

logger crashed before the end of RUN

RUN #9294 stopped

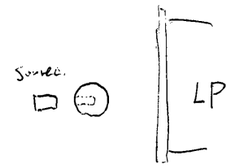
Nitrogen target Removed

15:21 #9295 AmBe 5inch sphere
w/o Nitrogen.

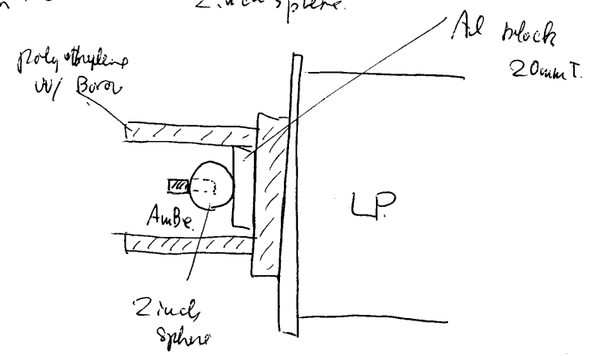


16:10 #9296 AmBe 2inch sphere

changed direction of sphere.



16:31 #9297 AmBe 2inch sphere.



16:52 #9298 AmBe 2inch sphere

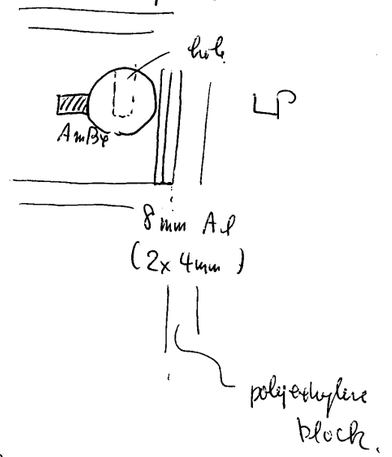
Al target instead of LN_2
(20mm t)

17:13 #9299 AmBe. 2inch sphere.
Al target 8mm thickness

The 2-inch sphere is rotated by 90°.

17:55 #9300 AmBe 2inch sphere

effectively ~ 4cm thick moderator



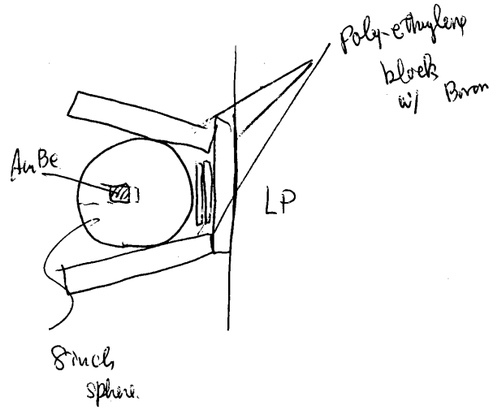
Bonner Sphere 2inch → 8inch

9/Mar/2005

18:13 #9304 AmBe

8 inch sphere.

2 x 4mm t Al



Data disappeared !!!

Erased by the logger !!!

18:48 #9302 AmBe

8 inch sphere

20mm t Al

Target changed from Al to LN_2.

19:20 #9303 AmBe

8 inch sphere.

LN_2 target.

21:20 AmBe source Removed.

19:38 #9304

19:56 #9305

9/Mar/2005

21:31 #9306 Pedestal Both circulation off.

21:32 #9307 LED

21:39 #9308 α $\lambda_{abs} = 135.6$ cm (#9309 debug)

23:34 #9310 α $\lambda_{abs} = 177.8$ cm

COSMIC RAY TRIGGER MODIFIED

Previous $(T1 \cap B1) \cup (T2 \cap B2) \cup (T3 \cap B3)$

New $(T1 \cup T2 \cup T3) \cap (B1 \cup B2 \cup B3)$

1:08.

1:05. #9311. CR (new logic)

6:43 #9311 end.

6:44 #9312 pedestal

6:44 #9313 LED

6:50 #9314 α $\lambda_{abs} = 14.3$ cm

6:58 #9315 CR (new logic) same as #9311

10:59 #9316 pedestal

11:18 #9317 pedestal

11:20 #9318 LED

11:27 #9319 α $\lambda_{abs} = 130.6$ cm

11:39 #9320 CR, same as #9311

16:12 #9321 α $\lambda_{abs} = 116$ cm

16:24 #9322 CR, same as #9311.

17:20 ~~Start~~ start preparation to recovery

~~19:31~~ 19:31 #9323 α ← Junk

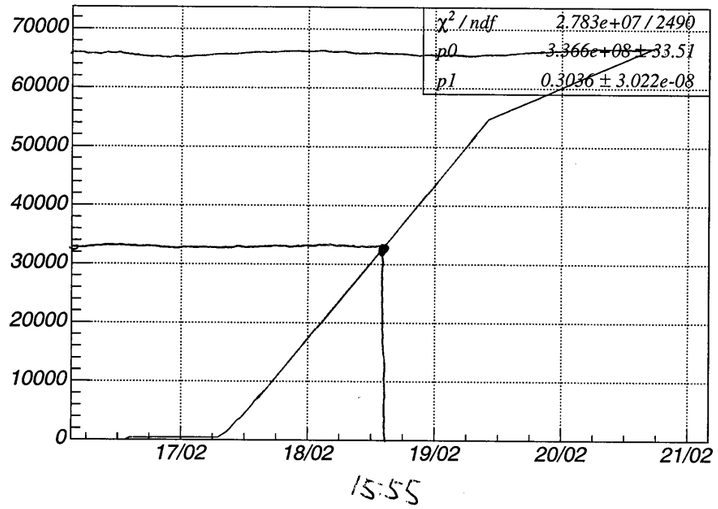
18:00 megonhm01 hung up → reboot.

18:14 #9324 α

18:23 #9325 CR, same as #9311

19:05 # stop 9325

HV off



15:55

Level t.p = 2.305 nF = 0.13

Recovering start

- Fill outer vessell with 0.25 atm N_2
- excite minco heater at 30V (this is the maximum voltage)
- Don't forget evacuate outer vessel before inner pressure becomes lower than ~~1 atm~~ 0.25 atm

SCS-700 (MSCB module for PT100) is broken. I prepared a new VI which does not access this module. (meg-lpt_notmp.vi)
One of values in recovering line is not fully open

↑ Integrated flow during liquefaction.

Half amount of LXe in LP corresponds 13 % filled in upper level meter.
So we should change recovering tank to second one when level reached that point.

22:00 found that HV had been ON. hvedit doesn't work. so we manually turn off.

22:30 Open fully the exit value

10/Mar/05.

23:50 For suppressing MSCB error message
"Error Reading MSCB bus",

MSCB Address [9-16]

in /Equipment/Environment/Settings/Devices/MSCB

in ODB

are changed fron "3" → "10"

dummy.

address of the Broken module.

12:00 Heater (MINCO) Voltage 40V → 35V 2ℓ/min

12:34 35V → 30V "

12:08 30V → 25V "

12:14 25V → 20V "

(20V → 25V) "

Off the heater for a moment and see the flow and N2 flow

12:30 heater voltage 30V. control on
evacuate outer vesel

11/March/2005

15:30. heater voltage was 24V → 30V

16:10. N2 filled to outer vessel. about 1/8 atm.

12/Mar/2005

	PT2 #8	PT3	PT4	PT5	PT6	PT7	PT8
11:15	70,0Ω	68,2Ω	71,0Ω	~~28?~~ 71,7Ω	79.4Ω	?	71,6Ω
12:00	70,2Ω	67,7Ω	70,3Ω	71,2Ω	77,0Ω	×	71,3Ω
13:10	69,8Ω	67,7Ω	70,7Ω	71,0Ω	77,9Ω	×	71,3Ω
14:15	69,8Ω	67,7Ω	70,9Ω	71,6Ω	78,1Ω	×	71,2Ω
15:30	70,0Ω	67,9	71,2	71,4	78,7	×	71,2
16:45	69,8Ω	67,7	71,0Ω	71,7Ω	78,7Ω	×	70,9Ω

13/Mon/2005

11:33 add Lq. N_2

13:00 Inner pressure starts decrease

	SM top	outlet pump	SM bottom	HL up	inlet pump	Minco heater
14:30	123Ω	70,1Ω	73,74Ω	74,1Ω	82,7	83,6Ω

14:08 Valve close. inner press. 0.122 MPa

14:45 Minco Heater off
Xe tank. pneumatic valve close

15:25 evacuate outer vessel

15:15 HV file 050220_2.hv loaded.

16:19	#9326	pedestal.	gas Xe · 0.125 MPa.	
16:26	#9327	LED	"	
16:36	#9328	alpha.	"	50k
16:45	#9329	"		100k
17:09	#9330	"		100k.
17:29	#9331	pedestal.		
17:28	#9332	LED		
17:37	#9333	alpha.		160k.

	SM top	Outlet lg. pump	SM bottom	HL up	Inlet lg. pump	N_2 out	Minco.
		~~SM top~~	~~Outlet lg. pump~~	SM bottom	~~HL up~~	Inlet lg. pump	~~N_2 outlet~~
16:30	73.06	70.92	74.56	74.93	84.20	X	76.75
17:00	73.24	71.12	74.70	74.70	84.29	X	76.58
17:30	73.61	71.80	75.19	75.30	84.72	X	76.63
18:00	74.27	72.20	75.70	76.35	85.12	X	76.63

18:10. HV off.

Xe recovery restarted.

4/Mar/2005

4:30 recovery finished
- Close values between IV and Liquid pump
- fill IV with 1.0 atm N_2.
  OV with 0.5 atm N_2
- Regurator set point 0V
- Close low pressure values

9:00 All Computers and Electronics ~~for Power Cut.~~ to turn off
power cut pull on tommorow morning. turn on computers and electronics and CERA compressor

12:00 Xe Tanks connect each other.

13:30. Xe Tank pneumatic valves connected pneumatic pipe not via valve controllers but directly pneumatic line for tomorrow power cut,