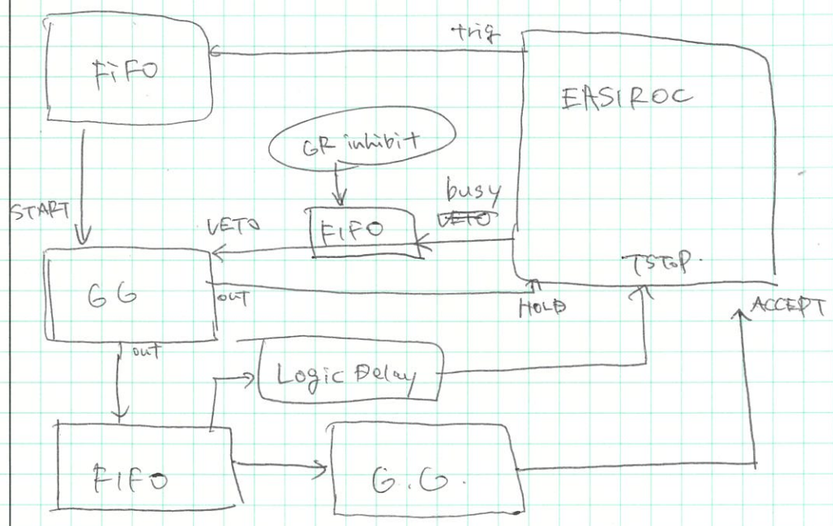
11/28
12:10



◎ EASIROCに PMTの信号を入れてテスト.

↳ LGは見えるが, HG, fast ampの信号が出ない.

PMTの信号の大きさを変えても見えず.

モジュールが壊れている? 明日 もう1台をもっていく.

11/29
10:30

Input DACの値が低すぎて動作が安定していないかも.

(511で動かしつづけるなとかいてあったので, 510で動かしていた.)

510 → 450 に変更.

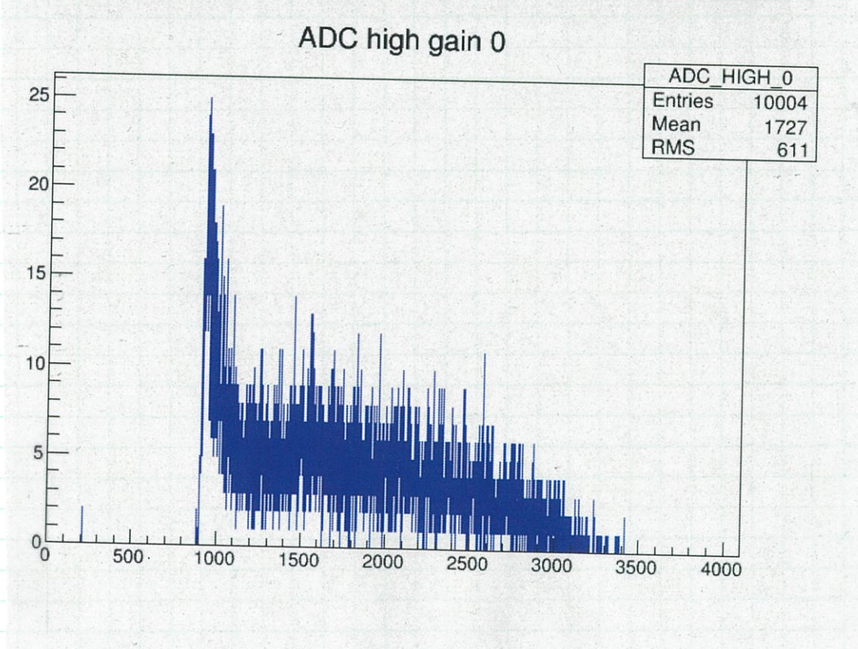
信号が見えるようになった.

PMTの信号 ~ 50 mV とした. ← ~~-1250~~ -1260 V

↑
GR トリガに
引っからないかも.

Run 9000 とってみる

→ スケーラに値がふえているか.



◎ PMT -1524 V

Attenu. 10 dB → ~ 50 mV

適切な信号がみえなくなる. Low gainでみる.

~~DAQ~~ 起動時.

~~Umegr~~ frc03. umegr にアクセスしようとすると、
permittion denied と表示される.

→ frc03 ~/.rhosts
umegr ~/.shosts に該当するアカウントを許可.

起動時は ホームディレクトリが マウントされていないので、

>su
> mount exports/home

で quser をマウント. 一度 logout して. 再度 login. すると

quser の ホームディレクトリが 現れる.

15:15 トリガが 見えない.

→ frc03 で triginit → GR+LAS.

trigsetup をみると

GR single sampling	1
LAS	1
2nd	0
Coin gate	16

trig pattern

1	2	3	4	5
on	on	on	on	on

Rate mater では 値がよめるようになった。

15:28 Run 9002

GR : 520 cps

LAS : 4.5 kcps

single sampling を GR:0 LAS:0 にした。

16:11 · GR trig. ~~1.1 kcps~~ 1.1 kcps
live ~~?~~ < 100 cps

· LAS trig. 3.5 kcps
live 150 cps

LAS trig. をぬくと GR trig. 99 %.

16:55 線源なしでとってみる Run 9006
bulid 後の値の表示が ~~借~~ 全てゼロ.

17:30 Run 9007

GR		~ ~~800~~ 700 cps
	Live	300 cps
LAS		95 cps
	Live	40 cps
	coin	40 cps. の状況.

~~Run~~ 9000 番代は 6月に使っていた
ER は 上書きされている...

Run 8000

→ Timing が 早すぎ. Live 90%くらい

LASの ↑ + 300 ns Run 8001 junk

12/2 修正

(vmegr ラックにある
12/2 GRaccepted をつないだ)

11/30 ?

V830 frontCount

ch #0	~~GR/LAS~~ GR Trigger Live	パネル⑩	11
ch #1	Buff change	パネル⑦	
これとメスタを つないだ → ch #2	~~GR/LAS~~ GR Clock Live (10kHz)	パネル⑪	~~8~~ 4
ch #3	V1190 almost full.		
E ~~400~~ 4ch用 ch #4	~~GR/LAS Tr~~ ~~GR/LAS~~ ER Trigger (Before VETO) (LAS → C5) (GR → C1)	パネル⑫	5
ch #5	EASIRoC Trigger Live	パネル⑬	6
→ ch #6	~~GR/LAS~~ GR clock (Before VETO)	パネル⑭	3

Run 8002 COIN がゼロ.

Run 8003 とりあえずとる

・ER trigger live は V830 でしかとっていない.

ch4 LAS trig. にした方がよい?

Live Time が 20%.

~~ー~~ vmegr の initialize vmedaq -i

・FERA 〃 を行ったが変わらず.

ferainit

・FERA が乗っているクレートコントローラ その電源を切って再度入れてみる.

FERA initialize 後 DAQ 動かす

↳ 表示が全て NaN になった...

triginit GR × LAS → 元に戻った (GR 20%)

trigger 条件を gr のみにする.

信号源 プラスチック → clock 変わらない.

・vmegr 上で ferainit_gr → うごいた.

・trigger 条件を gr × LAS にしたら ふたたび 20% ほどに。

→ vmegr 上で ferainit_las. (ふっかつ).

Run 8004 電圧が低すぎて相関がわからない...

-1800V に変更

↓

Run 8005

ERの TH を 80 → 20

Run 8006 junk 止まる.

TH 80 → 200

Run 8007 ビルドの際に正しく終了しない.

線源が端の方にあったので, 中央にうごかす

Run 8008

ERの TH を 70 にして

Run 8009 junk

~~Run 8010~~

LAS trigger を 200ns おくらせた.

Run 8010

12/2

10:30

Buff change パネル(7) ← phillips FIFO 321 3番目 (入力がない)

Time stamp のラベル

パネル(5) にいる → "Event synchronization" が Buffer change

"Timestamp" ラインを流用

(ラベルであとで区別する.

p.5 のとおりに配線した.

ためしに 9999.9V を dump.

V830	CH 0	70	
	1	1	
	2	50582	
	3	0	
LAS trig	4	22335	
acc.	5	0	
GR clock	6	70	

チャンネルアサインが変わる.

C4 → 11

C5 → 12 LAS trig. ~~GR clock~~ ~~C5~~

C6 → 13 LAS acc. ~~LAS trig. live~~

C3 → 14 GR clock

GR acc. ✓

Buff. change ✓

GR clock live ~~C4~~

v1190 almost full ✓

のはず.

目で見た所, アサインは合っていそう.

LAS trig. の Timing at ~ 200ns

Run 8011 → 期待は外すようにした.

V830 CH4-6 と

12 → LAS trig C5

13 → LAS acc. C6

14 → GR clock C3

GRラック側

Trig	C5	9.4kHz
Acc.	C6	1.2kHz
GR clock	C3	1.1kHz
GR clock live	C4	10kHz

パネル 12. 9.4kHz

13 1.2kHz

14 1kHz

C7: 1.1kHz

GR vme gr 側

100μs ごと

ランダムに信号は来ている

"

~~LAS clock live 9.3k~~

LAS trig. 1.3k ↓×95%

LAS acc.

~~LAS trig.~~

Front Coat の ~~ccc~~assignment が 1つずれているかも

走らせてみる.

Run 8012 → 相関が なくなった

元に戻す

Run 8013 相関は 戻った

Coat の assign を 1つずらす.
ch4 と ch5 を 入れ換える

Run 8014 ← 入れ換えた ch をまちがえた

Run 8015
最終的な ch アサイン

front coat (モジュール 1個まり)	パネル	V830	
		ch 0	GR accepted
	⑦	ch 1	Buff change
5	⑪	ch 2	GR clock live
		ch 3	v1190 almost full
7	⑫	ch4	LAS accepted
6	⑬	ch5	LAS trig.
4	⑭	ch6	GR clock

13:30 e492 : ~/data の シンボリックリンクを
~~data~~ /npia/v05/e492/2017dec/data にはりなおした.
以前の データは ~/datajune には, ある.

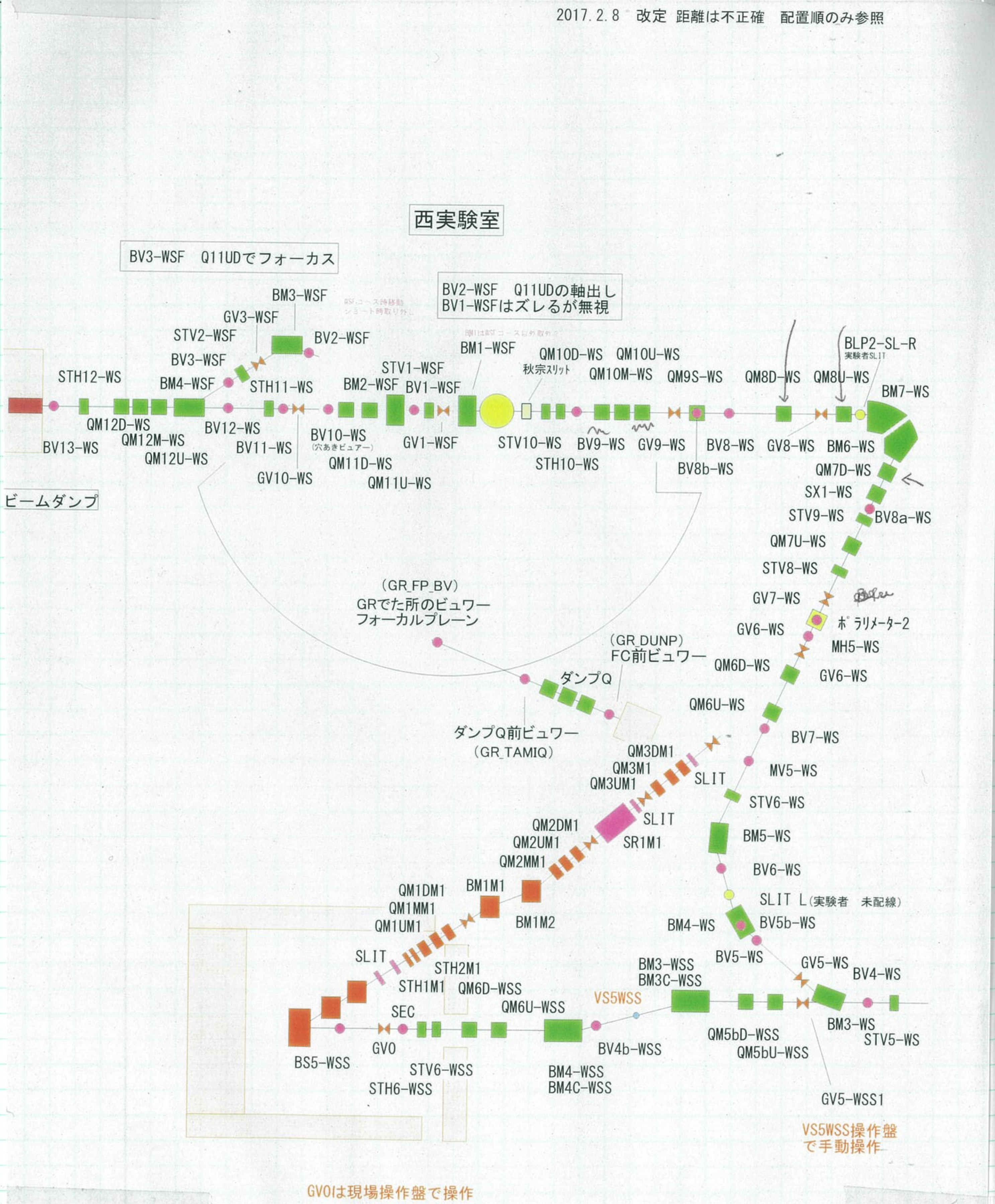
12/5
8:30 E377 + E422
dispersion matching ~~Q7D と Q8U の電流値を変えて~~

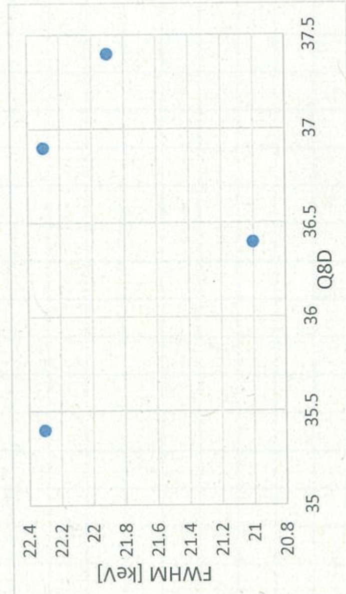
0° faint beam Q7D と Q8U の電流値を変えて
↓
分解能 を見る
1/4
典型 7-80 keV → dispersive
アクロマ 現在 18 keV (FWHM)

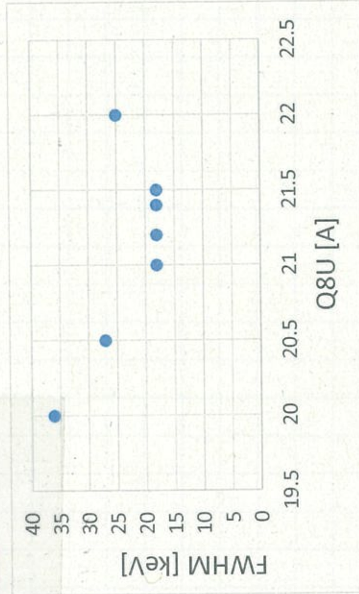
ビーム調整中
9:10

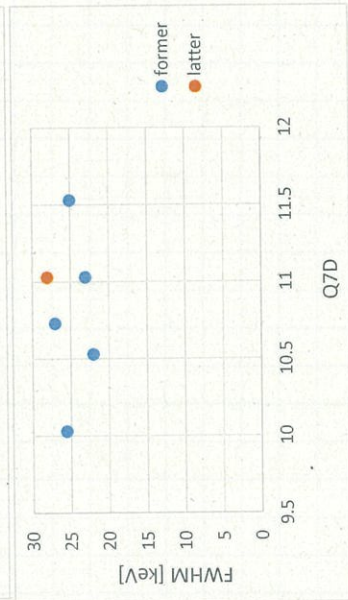
3連Q の セット → focus の微調整 の 流れ

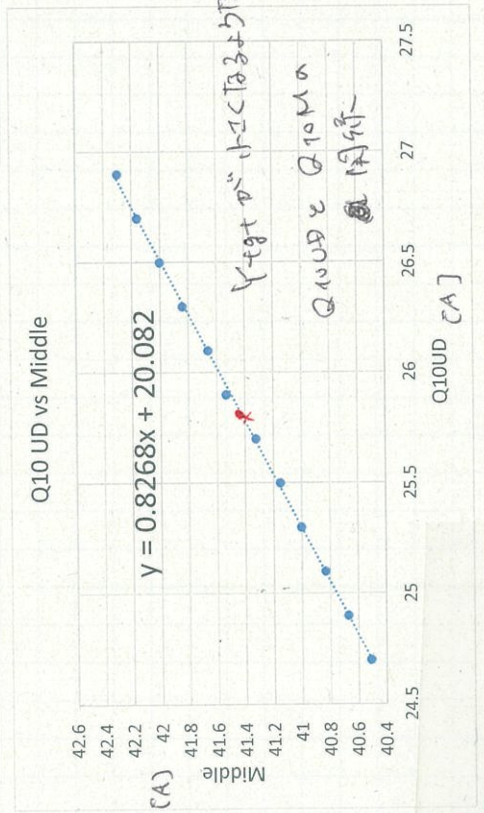
Target : Viewer
縦方向の focus を 細く する.











GR Q1 強くする over focus mode (p,p')
off focus mode Q1弱くする under focus

0° faint beam の分解能

Q8U	FWHM
21	18
22	25
20	36
20.5	27
21.5	18
21.2	18
21.4	18

Q7D	FWHM
11.03	23
11.53	25
10.53	22
10.03	25.5
10.73	27
11.03	28

Q8D	FWHM
36.4	21
36.9	22.3
37.4	21.9
35.4	22.3

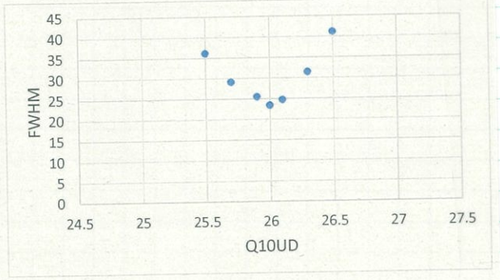
Q10UD	M
25.9	41.53
26.1	41.66
26.3	41.84
26.5	42
26.7	42.16
26.9	42.3
25.7	41.32
25.5	41.15
25.3	41
25.1	40.83
24.9	40.67
24.7	40.51

9:30 前夜:
Q10 UD と Q10M の値 を 組み合 に調整して
分解能 と 4.

23keV

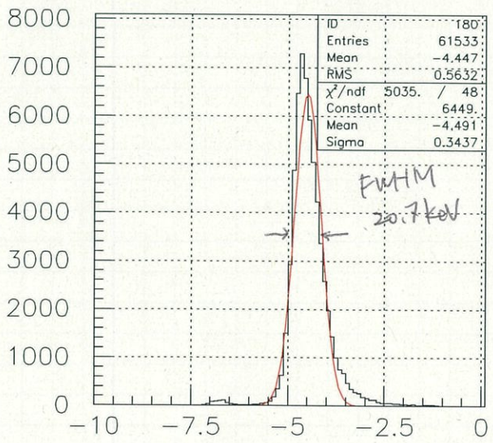
9:37 ビーム軸出し

Q10UD	Middle	FWHM
25.9	41.53	25.4
26.1	41.66	24.6
26.3	41.84	31.3
26.5	42	41
26.7	42.16	
26.9	42.3	
25.7	41.32	29
25.5	41.15	36
25.3	41	
25.1	40.83	
24.9	40.67	
24.7	40.51	
26	41.57	23.3

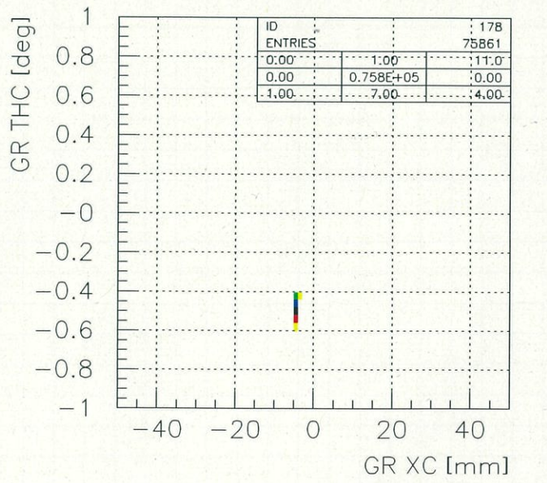


2017/12/05 10.42

faint beam



GXCN GR XC Narrow



GXCTHCE GR THC vs XC (expanded)

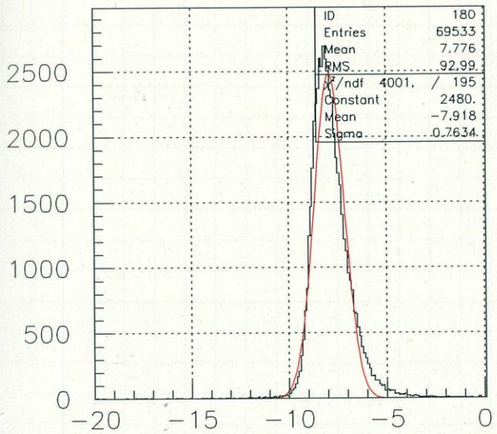
11:21 Au target, GR 8.5°

GR TH vs XC が曲がっている

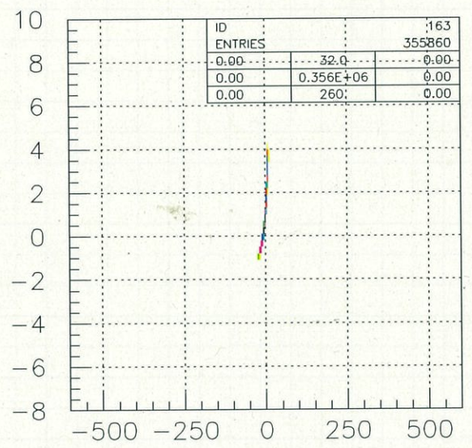
VPC
標準 + 200 mm に設定されている.

Correlation マトリックスで beam 調整すべし?
(+側) の方が correlation が大きい

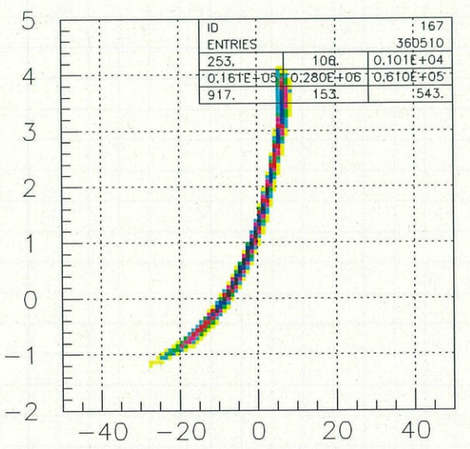
2017/12/05 12.12



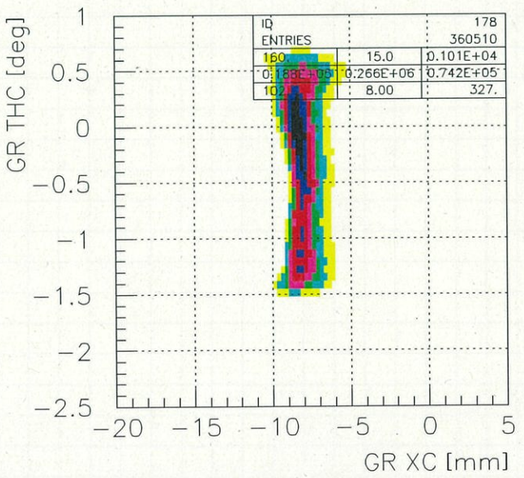
GXCN GR XC Narrow



GXTH GR TH vs X



GXTHE GR TH vs X (Expanded)



GXCTHCE GR THC vs XC (expanded)

13:40 磁場の値を変えて"-320"あたりでデータを取った(run 2105)

補正前の θ vs x がこういう形になるのは、
MQ 磁石の最適化が甘いのもある?
一次は、Q、二次は六重極の調整でハード的に調整可.

今、52keV (Gated) 0でゲートをかけた
68keV (not Gated) → 悪くなってる. (ビーム変化によるもの).

(dispersion matching

12/9 ヒロさんからメール

From: 藤田浩彦 hfujita@rcnp.osaka-u.ac.jp
Subject: Re: [rcnp-e492] E492 12月実験の人数確認
Date: December 8, 2017 15:57
To: Ami KOSHIKAWA amikoshi@rcnp.osaka-u.ac.jp

越川様

藤田浩彦です。
先日お会いしてから私は実験に顔を出していないので詳細は知らないのですが、以前に複数の実験で起こった「dispersion matchingによる高分解能調整がうまくいかない（持続しない？）」という問題が今走っている実験でも再発した様です。
一応今日のお昼の時点で30keVの分解能は出ていたらしいのでおそらくビームの再調整で解決したのだと思います。
ご存知かとは思いますが念のためお知らせしておきます。

藤田浩彦

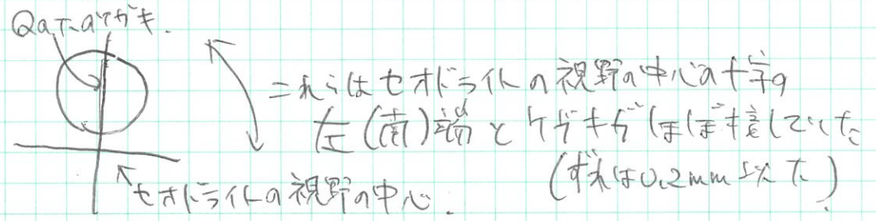
12/4 14:15

ターゲットラダーのアライメント

軸出しには SC 手前 3連Q下のケガキと
D1 上ケガキを使用する方針.

- E404 (2017. 春) の記録をもとに
GRを -0.025° に設置.
目盛りにて
0.1° = 20 mm なので
0° より 5mm 前方.

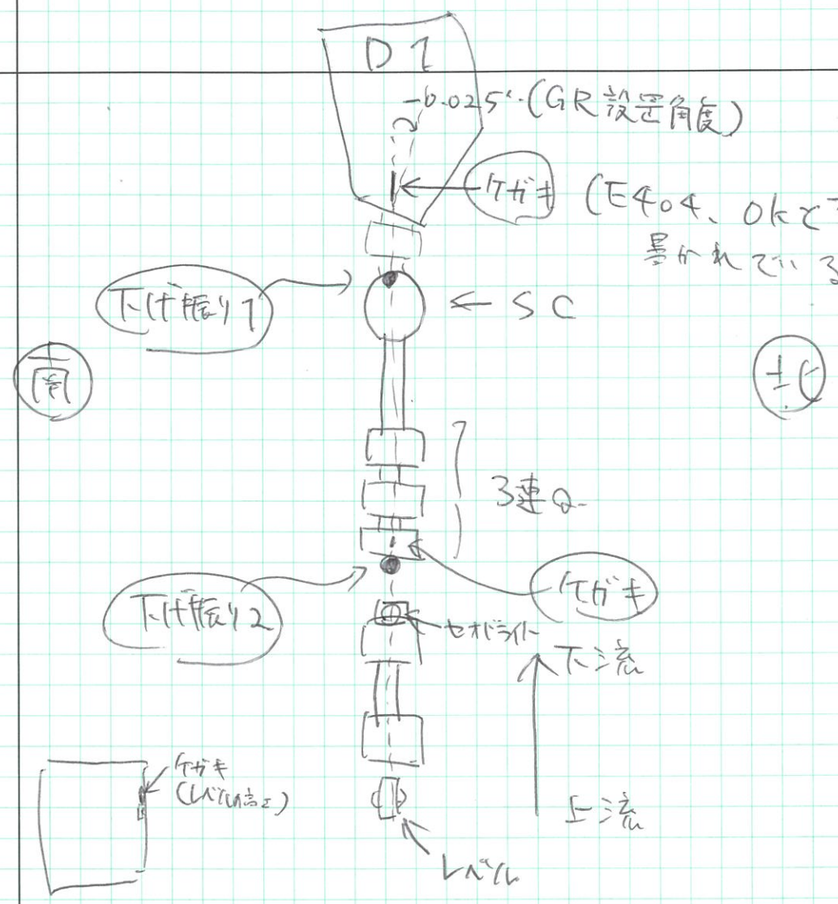
- セオドライトを水平にして、
D1上のケガキが視野の中心に来るような角度にした.
その後、Qの下のケガキを見ると、ほぼ中心にあった.



軸出しはできたことにする.

- セオドライトを用いてたば振りを設定した.
  - SC 横 3連Q 手前側 外
  - SC 内

こちらは軸穴スリットのケーブルを取りはずさないと見えなかった.



- レベルを設置した.

高さ

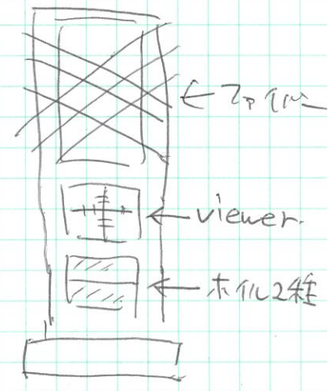
- レベルの南側にある柱のケガキを基準にした.

- 直前の実験でアライメントされた標的ラダーのviewerの高さとも一致していることを確認した.

軸

- セオドライトを使って置いた2つの下げ振りが視野の中心に重なるように合わせた.

- ラダー0(ゼロ)を置く.



↑ファイバーを斜めにはってある

- viewerの横の位置をレベルで合わせた.
(ラダーの中心 = ビーム軸ではないので、viewerをラダー中心より北にとりつけた)

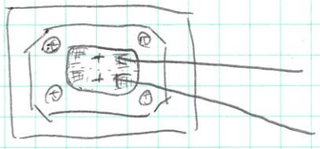
- viewerの高さ中心は

3.246 V

(Upの向き)
ホ→ヘ

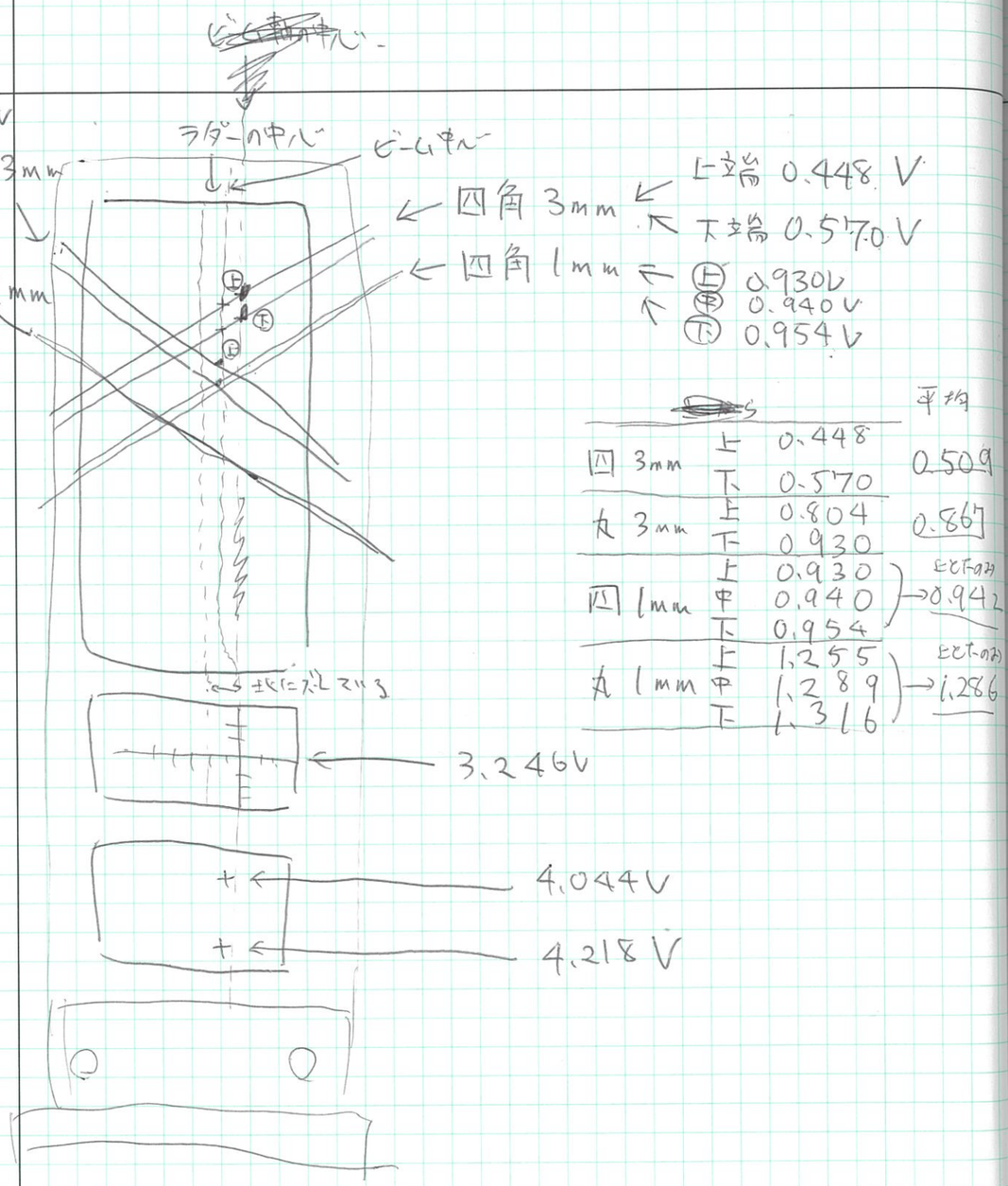
であった.

- ホイル標的の代わりにターゲットホルダーに方眼紙をマウントしラダーに取りつけた.



4.044 V
(Upの向き)
4.218 V
(Downの向き)

方眼紙の上から1/4の長さと下から1/4の長さのところに十字の印を書いて、金とアルミの中心と見たてて高さを測った.



			平均
四 3mm	上	0.448	0.509
	下	0.570	
丸 3mm	上	0.804	0.867
	下	0.930	
四 1mm	上	0.930	→0.942 (上と下のみ)
	中	0.940	
	下	0.954	
丸 1mm	上	1.255	→1.286 (上と下のみ)
	中	1.289	
	下	1.316	

位置はすべて電圧が大きくなる向きに合わせた。

読みとり精度？どこを基準に合わせたか？

- 丸 3mmの下端と四角 1mmの上端がほぼ重なっていた。
- 四角3mmの"太さ"は 0.122 Vで
  丸 3mmの 0.121 Vとほぼ同じだが

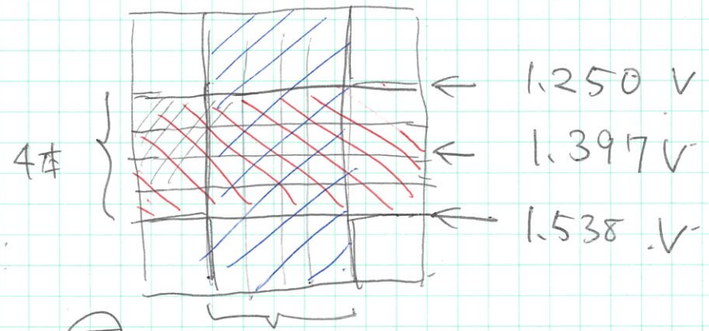
Proto type を置く。(手順はラダー0と同じ)

- Viewer 3.248 V (Upの向き)

ホイル上 4.040 V (Upの向き)

ホイル下 4.219 V (Upの向き)

(上)

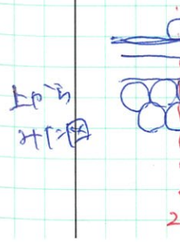


(下)

Ladder中心 ~~が~~ が Beam lineからずれている ~~ために、一層目のファイバーの全部~~ ~~あたりが Beam lineにかする程度になっている~~

ぎりぎり？

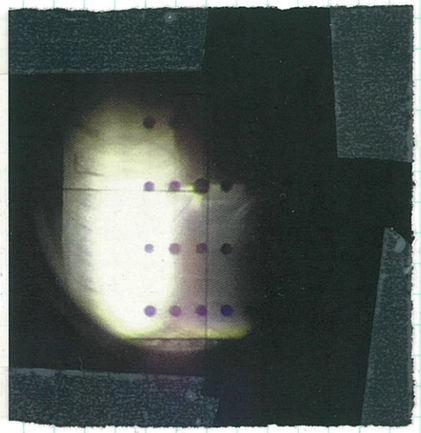
設計通り Beamが中心にあたるように Ladderをカロエすることにする。



2017.
12.15
10:00
阪上

⑥ sieve slit アライン

- セオドライト・レベルが昨日のアライン時から動いていないことを確認した。
- GRを0度に回して sieve slit をレベルで位置を確認。
  → 南・上に約1mmずつずれている（上には0.9mm程度）
  ミムで調整することにする



- 毛を抜いていたミム：
  上下方向：2.6mm分（0.2+0.4+1.0+1.0）
  南北：1.2mm（0.2+1.0）

- 新しいミム：
  上下方向：0.1+0.2+0.4+1.0 = 1.7mm分
  南北：0.2+1.0+1.0 = 2.2mm分

- ミムをはめた後、フランジをネジどめせずに ハウゼンにさするように置いた状態でレベルで確認した
  → 南北方向 北に約0.5mmずれている。上下はちょうど合っているように見た

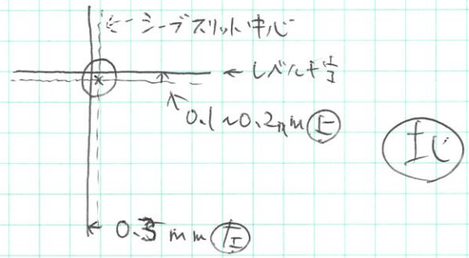
さらに新しいミム：
南北：0.2+0.2+0.1+0.4+1.0 = 1.7mm
上下：0.2+0.2+0.4+1.0 = 1.8mm
（ネジでおしつけ・真空にいったときに大気につぶされる分
0.1mm程度下がることを予想して修正）

南北：0.1を追加
→ 0.1×2+0.2×1+0.4×1+1.0 = 1.8 mm
上下：0.4+0.1を追加
→ 0.1×1+0.2×2+0.4×2+1.0 = 2.3 mm.

穴が視野の中心より
少し下
少し南

南北　0.1mm × 1 追加
0.1×3 + 0.2×1 + 0.4×1 + 1.0×1 = 1.9mm

上下　0.1mm × 1 追加
0.1×2 + 0.2×2 + 0.4×2 + 1.0×1 = 2.4mm



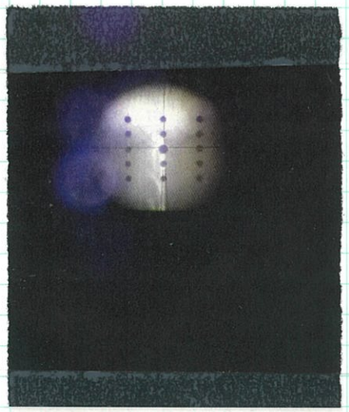
↑ 最終的な値。

- レベルの視野の中心は、シーブスリット中央の φ3 の穴に対して、
  - 0.1〜0.2 mm 上方
  - 0.3 mm 南方（左）

  にあるように見えた。
- ズレの大きさは穴径との相対で目視により見積った。
- 南北（左右）のズレは スリットの シム追加前は中心が北にあったが 0.1mm のシム追加により南に変わった。
  このことから、0.1mm以上の厚さの シムではこれ以上南北を調節できない ことになる。
  （また目視によるズレの評価精度も そのくらいでかないことがわかった）

- 上下のズレは レベルから目視で見積もると 南北、（左右）のズレより小さいようであった。 このことから、上下位置の調整もこれ以上は 行わないことにした。

- 散乱槽 標的 ～ シーブスリットまでは おおよそ 500 mm なので、仮に
  ↑ 要出典
  シーブスリットが 0.5mm ズレていたとしても 角度のズレは 1 mrad である。



途中で PLC 制御によるスリットの切替えの失敗が 立て続けに起こるようになった。
おそらく原因はリミットスイッチとスリットの回転の 位相がずれてしまったためであろうと思われる。
一度 回転機構を ~~取り外して~~ ケーシングから取り出して

12/15
10時ごろ
かなつま
つむら

Ladder 再アライン

Ladder 下部の、台座との接続部分のタップを大きな切り穴にして、Ladderを北にずらせるようにした → Ladder中心をBeam line上にもってくることができた。

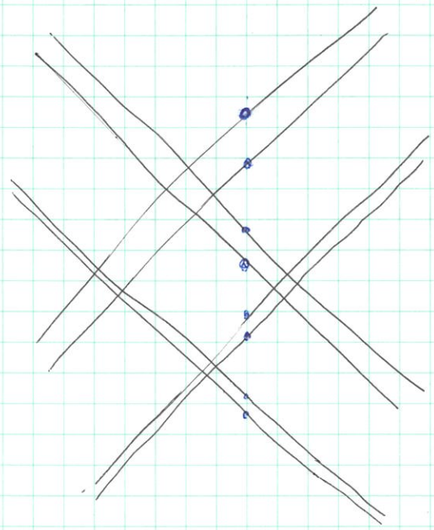
Ladder ① allign

□ 3mm 上端 0.544▽ 平均 0.601
下端 0.658▽

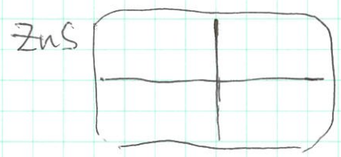
□ 1mm Ⓢ ~~0.~~1,007▽
Ⓣ 1.048▽
平均 1.0275▽

○ 3mm Ⓢ 0.750▽ 平均 0.8065
Ⓣ 0.863▽

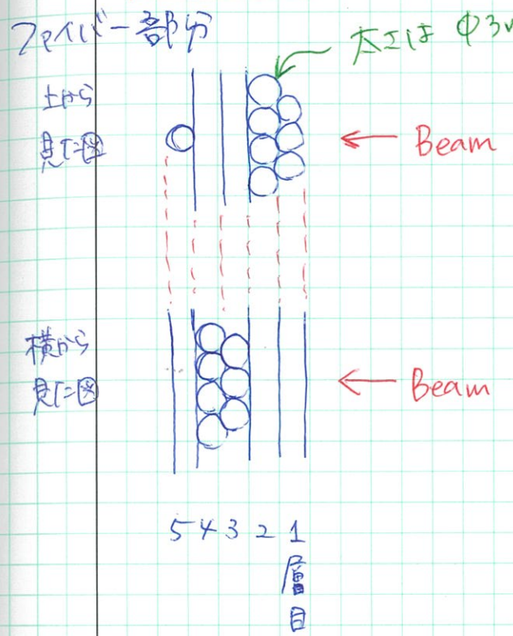
○ 1mm Ⓢ 1.216▽ 平均 1.231
Ⓣ 1.246▽



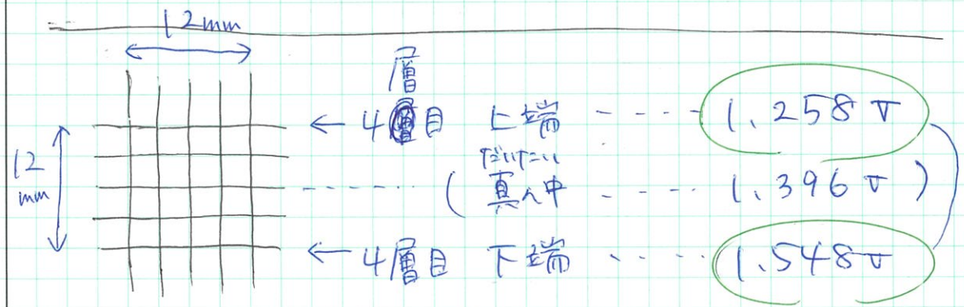
Ladderを上げる向き
(数字を下に)
下る向き

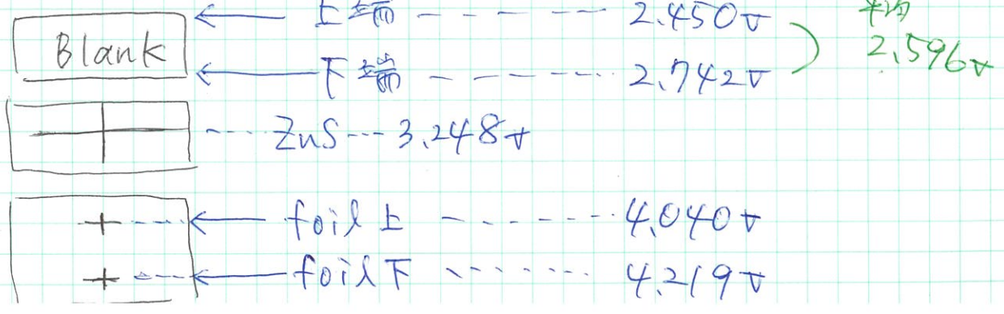


Ladder 2 allign



アラインでは、1層目の真ん中のファイバー(幅3mm)の中心がBeam line上にくるように、Ladderの南北を合わせた。
(精度は ±0.3mmくらい)





19:00 くらい

ダクト取り付け

散乱槽内配線

散乱槽真空引き始める (~19:30頃)

20:13 ごろから

ノイズおとし

- NIMビン - NIMビン - 散乱槽 (フィードスルー) がとす
- 多芯ケーブル を CASにおとす
- 散乱槽中 シールドをおとす
- 〃 外 シールド浮かせる

ノイズレベル

0ch	± 10mV
2ch	~~±20mV~~ (~~ケーブル~~) + 20 mV − 0
4ch	+ 20 mV − 15
6ch	+ 15 mV − 5
8ch	± 15 mV
10ch	± 10 mV
12	± 13 mV
14	± 13 mV

20:30 散乱槽下の ラジカルゲージで 4×10^{-1} Pa

DAQ

panel no. 30-36 candidate.

connection check.

30 ○
31 ○
32 △ (100Ω reading when 50Ω terminated).
33 ○
34 ○
35 ○
36 ○

we'll use 33 - 36.

33 ~~G~~ Easiroc accepted → GR.
34 GR Inhibit → Easiroc
35 LED Signal → Easiroc
36 LED trig → Easiroc

15/Dec/2017

Aimi ◦ The hold timing is too slow
(shaping time : 25ns)

~~w/o~~ C

We can adjust timing w/o G.G. ↑ too slow

* try to use Phillips Logic Unit Module

◦ Scintillators ~~has~~ were has been put on FP. this morning

10mm × 2

◦ We found a signal ~~with~~ from the scintillator with a β-ray source

◦ I made LEDs for the calibration system

insert LED → LEMO - LEMO connector

wrapped with a tape

20:40 LED : emits light with + signal

Run 8016 GR×ER test (50000 event)
Run 8017 GR×ER test (500000 event).

Run 8018 junk.

~~Run 8019~~

@ 16:20 no events in 3-6 ch of v830
vmegr.conf ~~(cat)~~ was linked to another conf. file
~~(rm)~~ ~~(mkdir)~~ link vmegr.conf → e492-vmegr.conf

Run 8019 junk.
Run 8020 GR×ER test (500000 event).
↳ initialize Vmegr.

Run 8021 → junk. (.gr and .gv were missing.)

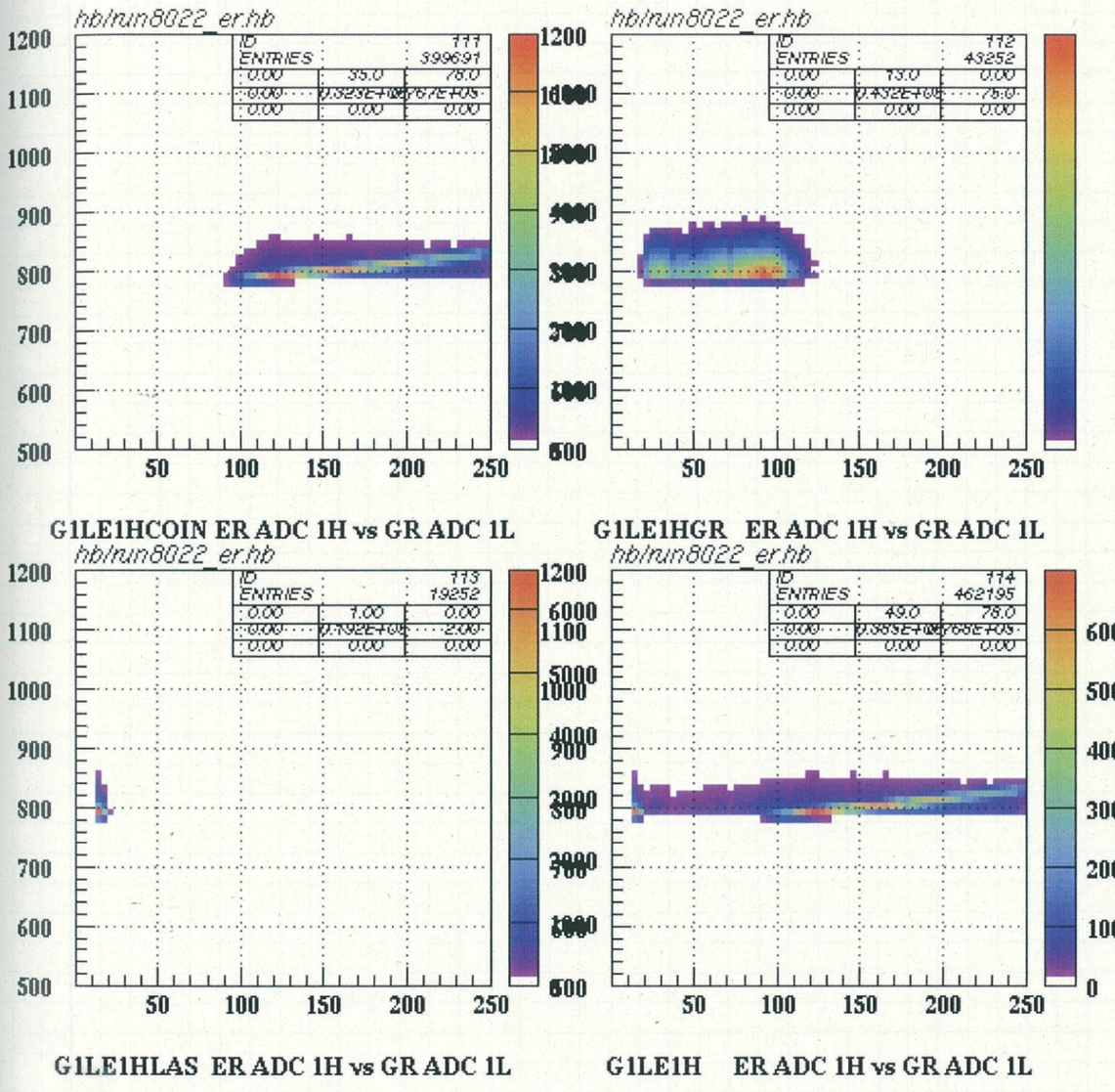
Run8022 GR×ER test (500,000 event).

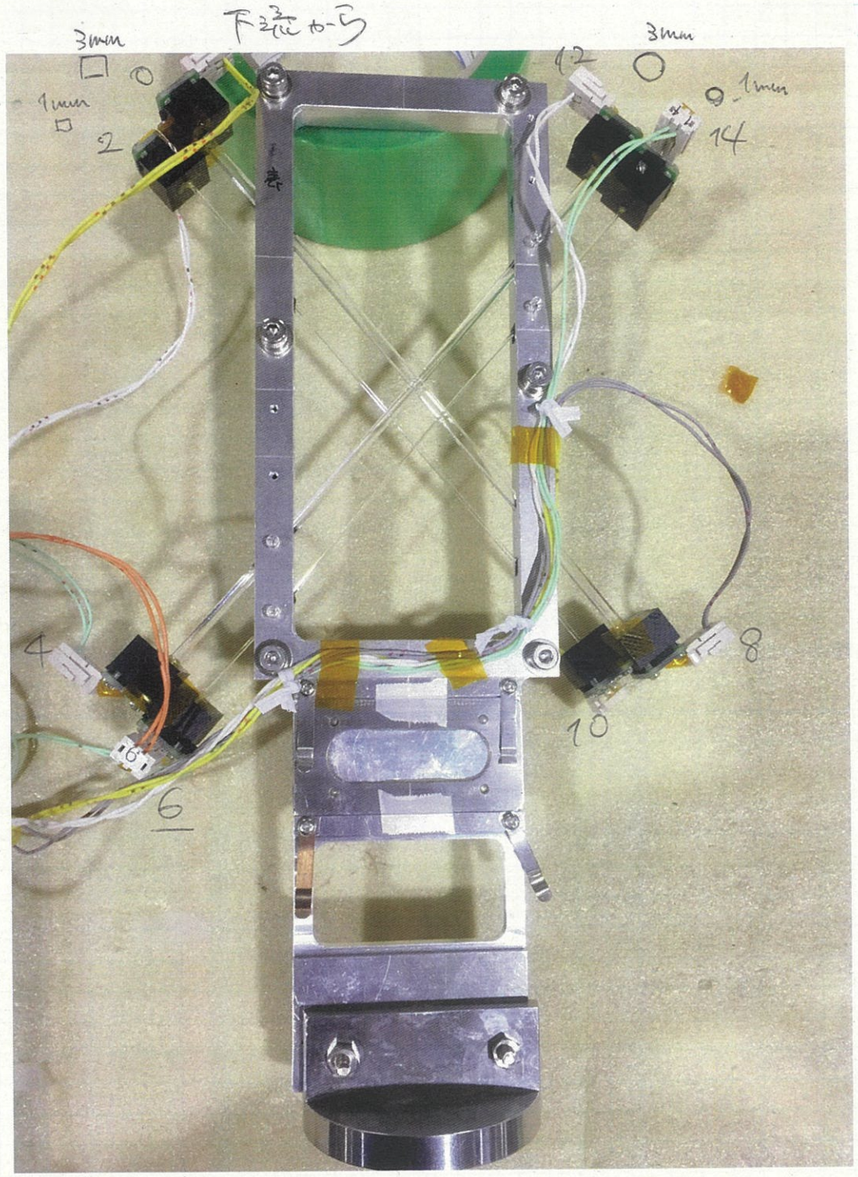
~~Run 8023~~ Run8023 2
HV of ~~scin~~ FP-Sci. 1900 → 2000 V.

→ VDC check Run 8024
There's no missing channel.

Run 8022

2017/12/15 16.55





CHアサイン

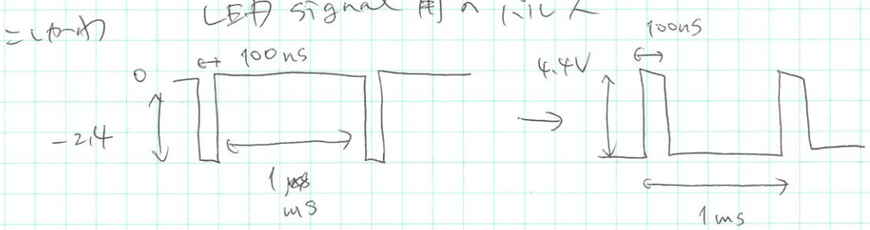
3mm □	0ch, 8ch	12/16 ※02:53
1mm □	2ch, 10ch	MPPCとCHの対応は
3mm ○	4ch, 12ch	6月の実験とは異なる.
1mm ○	6ch, 14ch	(MPPCとfiberは一致)

6

20:03

これから

LED signal用パルス



に設定した。

Q1のカメラはまだ設置していない.

※ビーム調整時におく.

※※ VDCフローレート 明日かえる (粉にする)

◦ Q1-FC 4.0° (0.648V) に設定

◦ VDC近づけた.

◦ GR 4.5° にある., 真空度は悪くない.

LED を用いたキャリブレーション

1216 test001.dat

F.G. : 3.0V　　position : viewer

F.G. : 2.4V に変更

1216 test002.dat　　photo peak がみえない

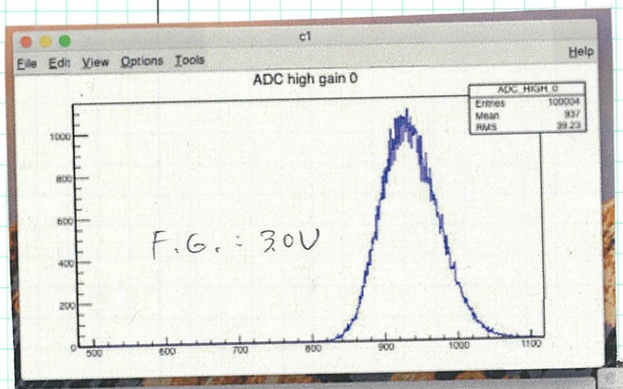
F.G : OFF

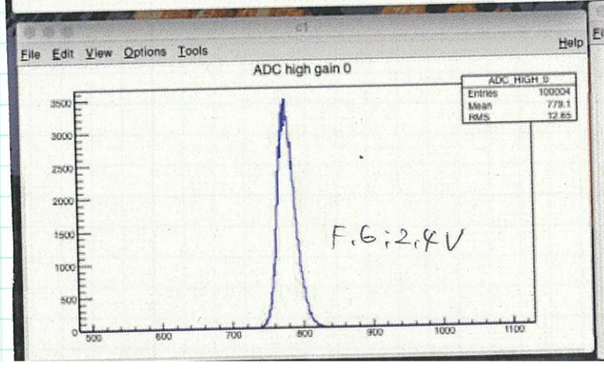
1216 test 0003.dat

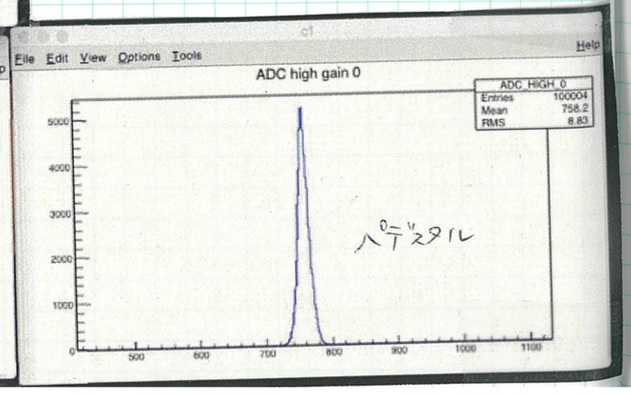
このときの DC-DC コンバータの電流値 : 7.61mA

HV : 57V (preset)　56.76V (actual)

00:54







- gain が小さすぎる？
- photon 数 多すぎ

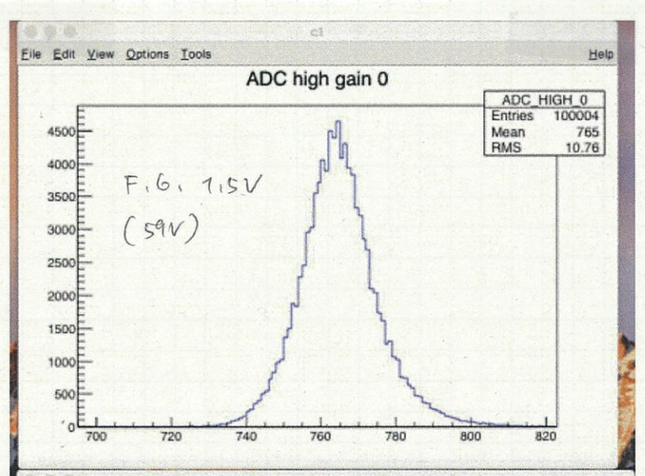
01:21

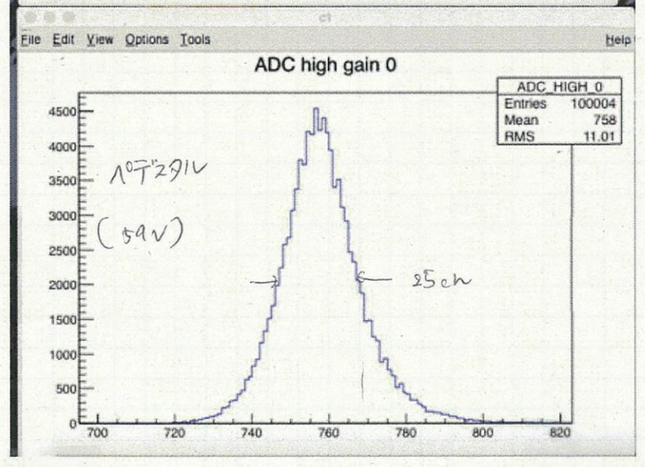
- F.G. : 1.5V
- HV : 59V (preset)　58.09V
- Input DAC　25 channel, yml

1216 test 0004.dat

- F.G. OFF にしてとる。

1216 test 005.dat





fast amp 2V

ノイズレベル ± 20mV

だが、ペデスタルが広い。
(次頁参照)

- ノイズおとし
- TTL信号を
  計数室で NIM に変える？
  (今は実験室で level adaption を使っている)

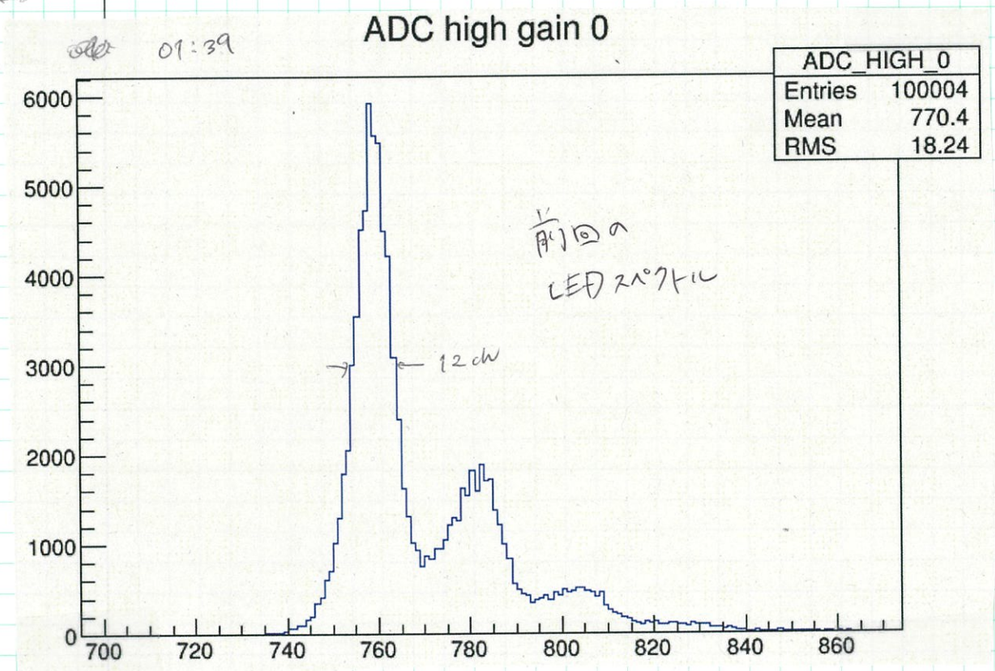
jitter して
分解能悪い？

・F.G.：2.5V に変更

1216 test 006.dat

Ch アサイン & MPPC の対応が前回と違うのであった。

DAC の値を全て 300 にする。



01:50 実験室入室

F.G. ~~Shaper~~ sync. の信号を計数室で TTL→NIM にした。

	fast		shaper out
0ch	±7mV,	20mV の成分あり	±5mV
2ch	±10mV	〃	<±10mV
4ch	±12mV	〃	±10mV
6ch	±4mV	10mV, 〃	±2mV
8ch	±10mV		±2mV
10ch	±5mV	10mV 〃	±2mV
12ch	±15mV	25mV 〃	±10mV
14ch	±12mV	〃	±10mV
(11ch			±12mV)

02:35 SC外 ~~ミールド~~ シールドを 片方 フィードスルーと NIM ピンに おとした。 もう片方

・LED用信号 T コネクタ ~~信号発生器~~

	shaper	~~予備~~
0, 2, 4	±3mV	~~±5mV~~
12	±5mV	±10mV

02:47 部屋 light OFF 実験室あた

1216 test 007.dat ペデスタル (HV: 0V)

preset 59V actual 58.07V

F.G. 2.0V

1216 test 008.dat

3mm 0, 4, 8, 12 ch
1mm 2, 6, 10, 14

03:00 F.G. : 2.3V
1216 test 009.dat

03:25 HV 調整

これ以上大きい値だとよくない。
全て InputDAC を 470 (電圧最大) にする。

F.G. 2.2V とる。 1216 test 010.dat

と分けず…

F.G. 1.9V
InputDAC 全て 400
HV preset 57 actual 56.11V 1216 test 011.dat

解析してみる。

value:
InputDAC : 256 — 511

仕様書より
256 — 4.5V
511 — 0V 対応。 $\frac{256}{4.5}$ = 56 ch/V と見つもれる。

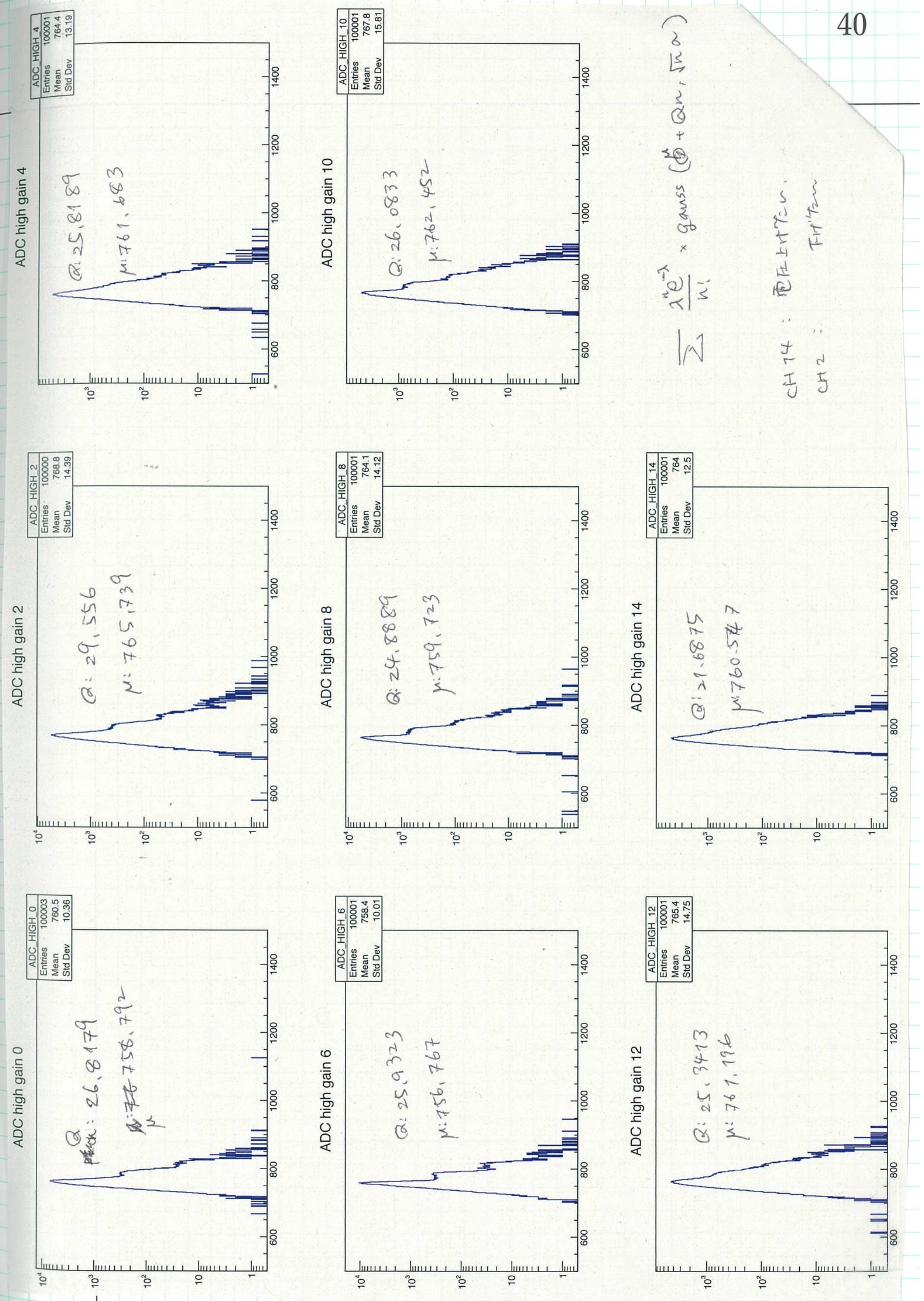
今、14 電圧↑ → 14 以外 300, HV 57→58.
2 ↓ → 2 を 270 にセット

1216 test 012.dat に保存。

↑ ch0 みれない。

011の設定のまま 14, 2 のDAC値を変えればよい？

~~14:370~~
2 : 370
14 : 430
他 : 400



1216 test 013.dat をとった。

~~CH 2 間隔 26.6878~~
~~ペデスタル 758.1722~~ ← DAC の値が変わったから？

~~CH 14 間隔 26.6879~~
~~ペデスタル 75~~

CH2 間隔 27.663
ペデスタル 766.929

CH14 Q 27.9897
μ 758.114 やりすぎた。

~~CH2 380, CH14 4~~

CH 2: 間をとって 385

CH14: 420 で再チャレンジ.

1216 test 014.dat ← 設定ファイルを書きかえ忘れ.

1216 test 015.dat

CH2: Q 23.1083 → DAC 390 にする.
μ 766.783

1216 test 016.dat (Q: 27.1236)

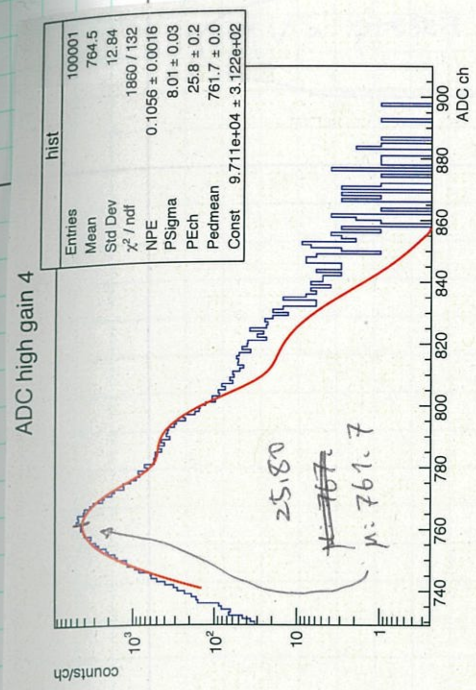
CH14: Q 26.0188
μ 759.111. かわり

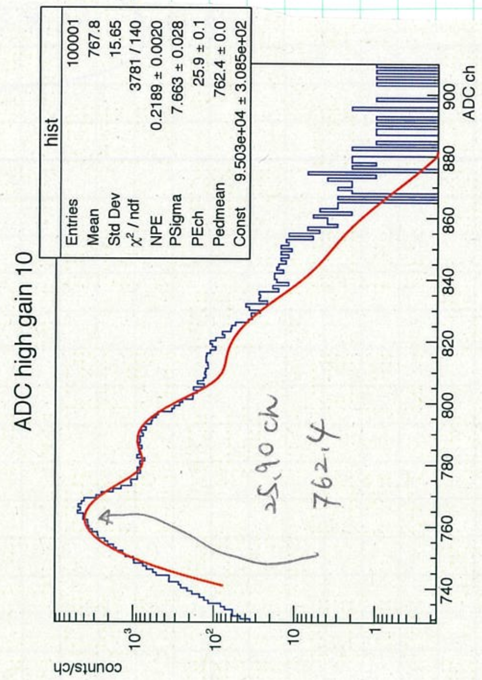
DAC 387 にする. 1216 test 017.dat

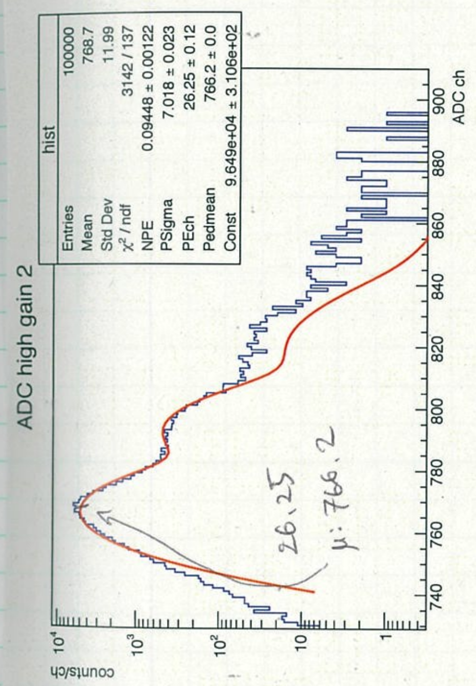
Q: 26.2522 これにする。

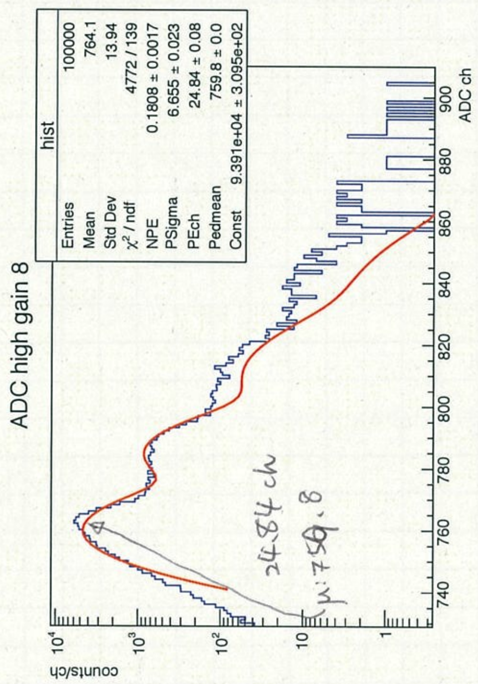
04:44 結局、次のページの値を アナライザに入れておく.

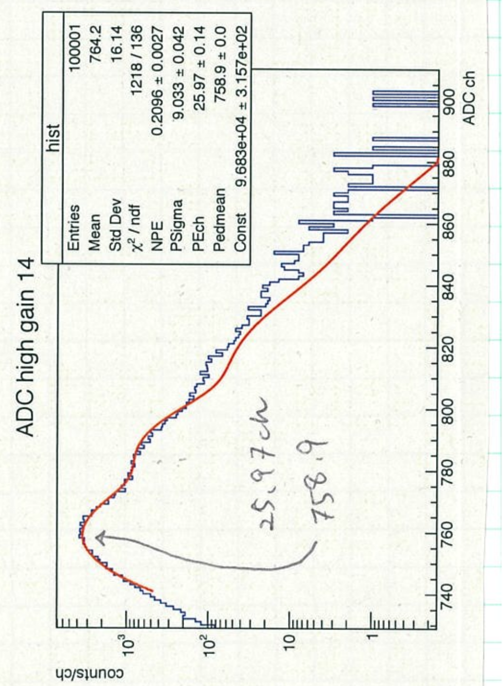
HV の preset : 57V

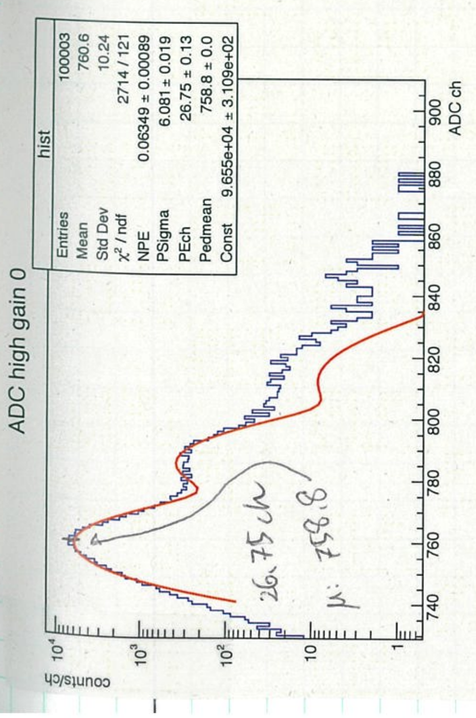


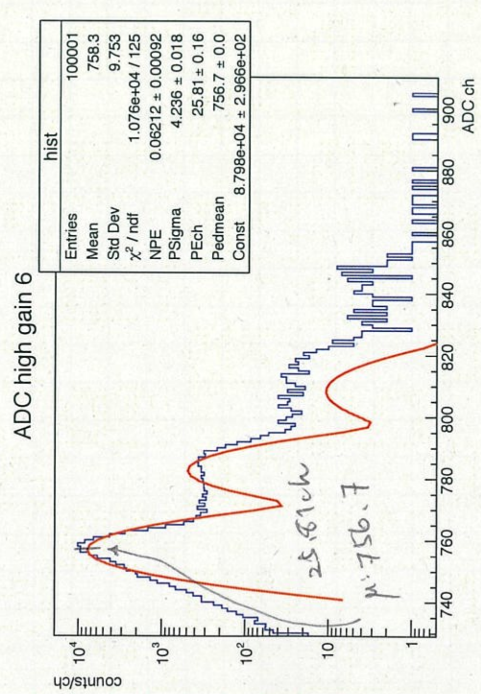


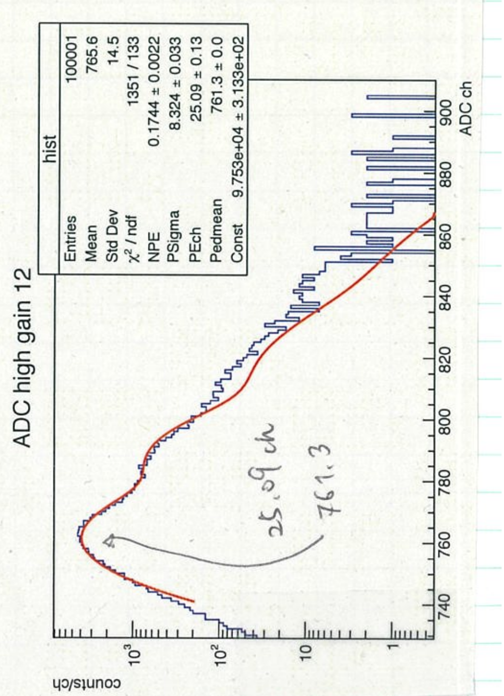












5:30 Q1FCセット設置

GRのガスフロー Ar 200 → 100 mL/min (標準値) に変更
メンブター 80 → 40 mL/min

07:30 スリット を blank に変更

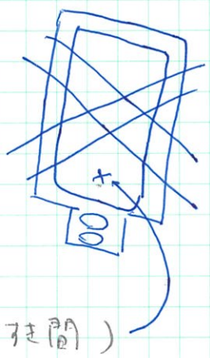
9:12 ビームトランスポート 完了

09:32 AVFの発振器が落ちた

10:00 ビーム 復旧

スポットの写真を 撮ってもらった

- 西の入り口での電流量を確認
  BS 3で 1.25 nA ±0.1 nA



ターゲット : Blank (ファイバーの 下方の すき間)

Q1FCの位置 @45度 を探す

position

0.648 V ⇒ 0.670 V ---ビームカレント 1.36nA

(↑4度ずつ 振る)

ビームカレント読み 1.27nA

Target Blank
2.083 V

Q1FC位置 0.670V とする.

WS Device Controller: Sat Dec 16 10:12:06 JST 2017

2017/12/16 10:12:07

Scattering Chamber | GR | LAS | WS Beam Line

GRCollimator: 1:Blank | 2:R Open | 3:(p,p') Sieve Slit | 4:UD30-LR20

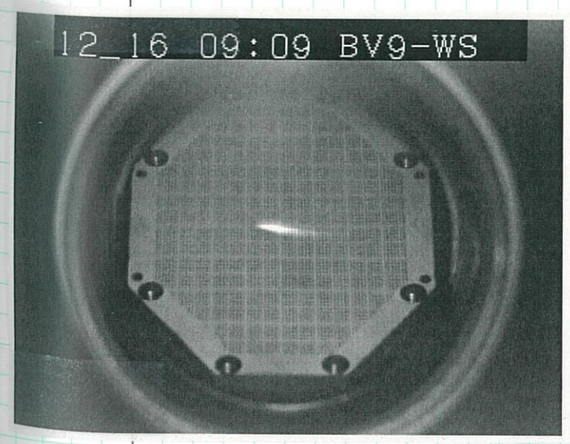
	PRESET	ACTUAL					
Q1-FCPosition		0.670	V	IN	◀ ■ ▶	OUT	
Q1-FC ZnS	OUT ◀ ▶ IN						
BM Yamagoshi L		2.083	V	OUT	◀ ■ ▶	IN	
BM Yamagoshi R		0.000	V	OUT	◀ ■ ▶	IN	
BM Yamagoshi U		0.000	V	OUT	◀ ■ ▶	IN	
BM Yamagoshi D		0.000	V	OUT	◀ ■ ▶	IN	
FP Stopper Pos		0.392	V	OUT	◀ ■ ▶	IN	
FP Stopper Rot		32.766	V	CCW	◀ ■ ▶	CW	

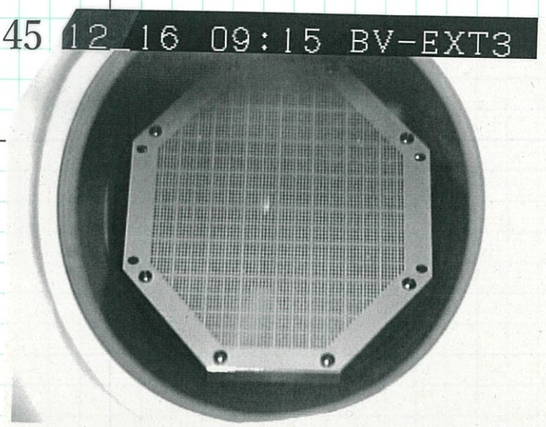
10:21 AVFの発振器がおちた

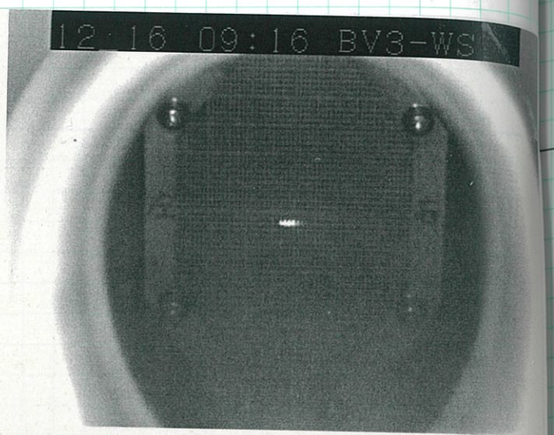
LADDERの Blankの値を WSDEVに 登録した.

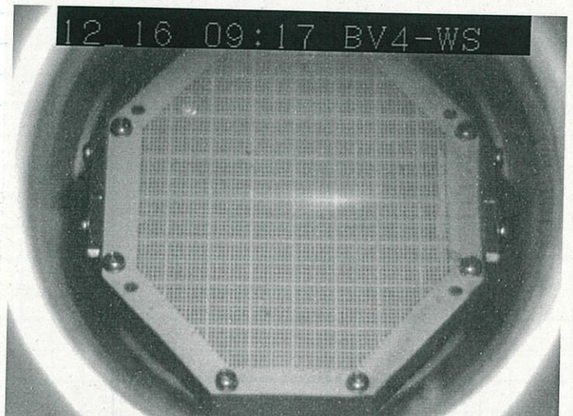
10:45 VDC HV ONする

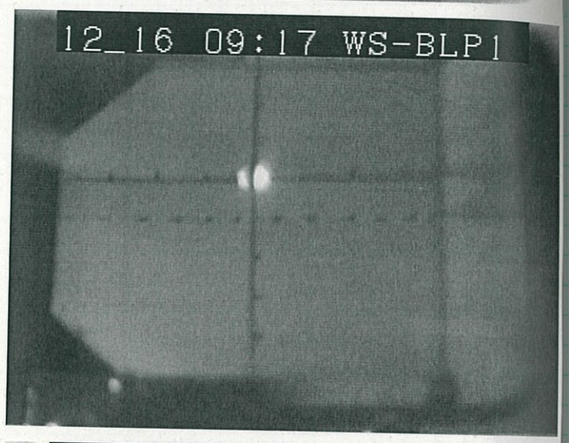
Cathode -5.7 kV
Potential -0.3 kV

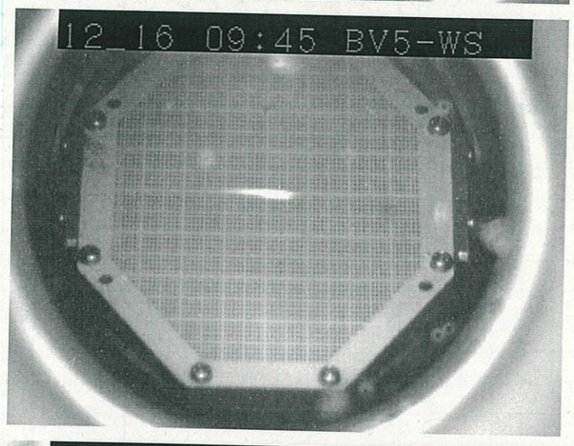


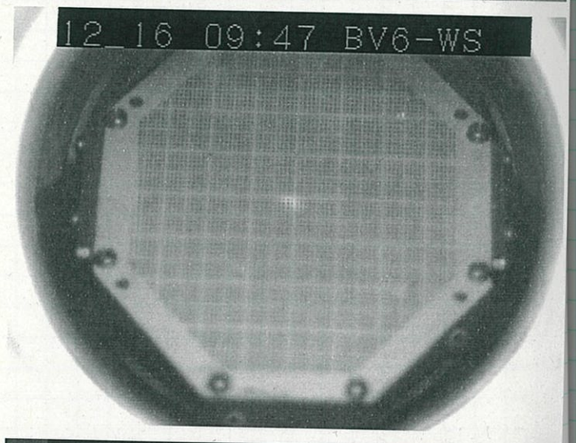


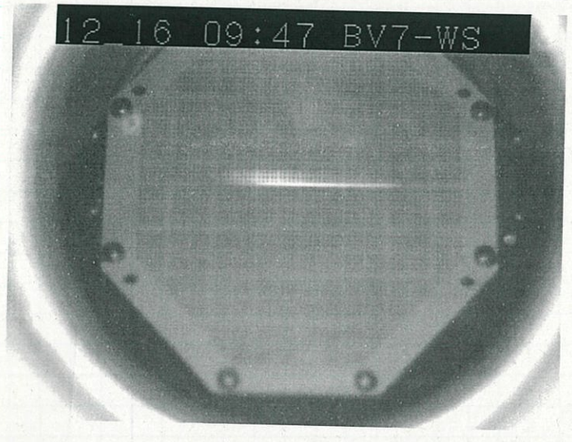


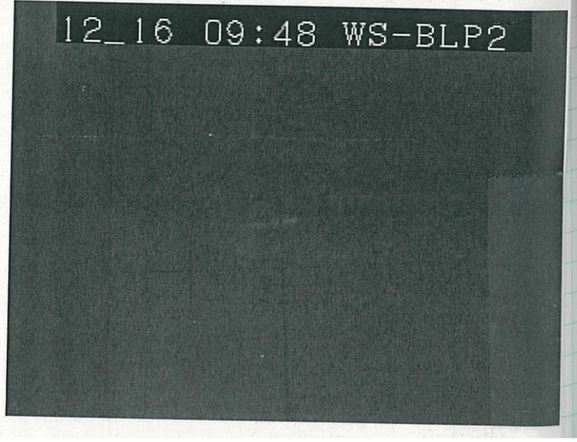


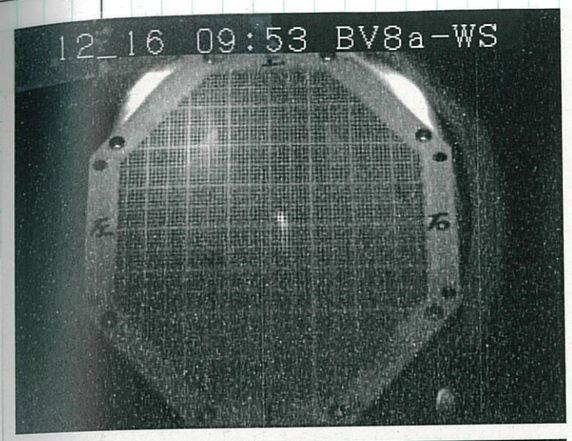


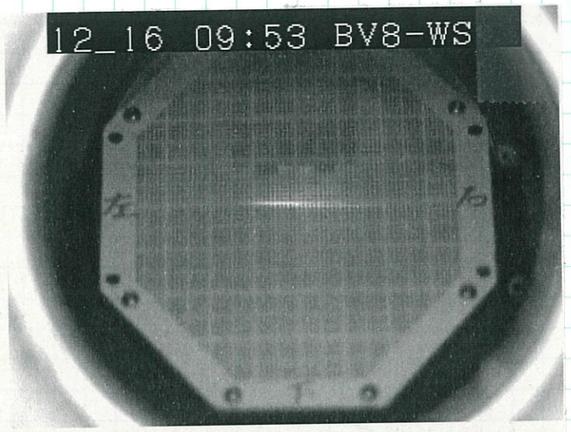


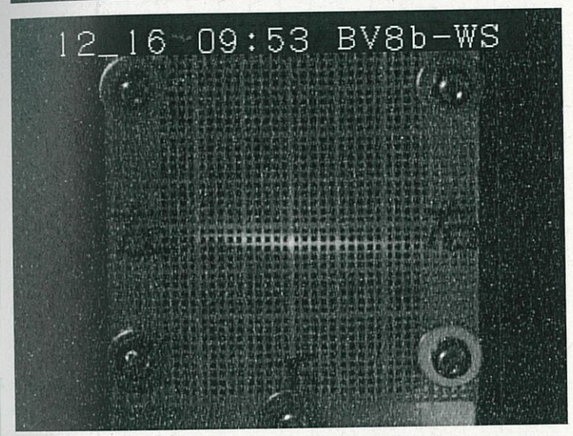


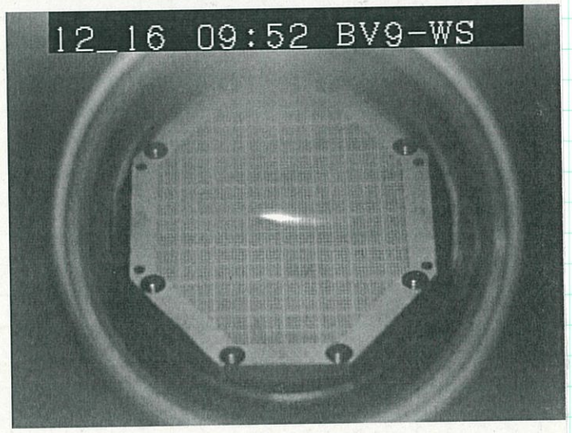






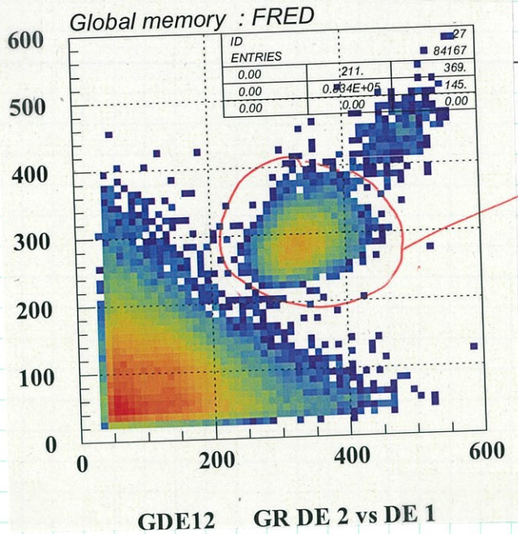






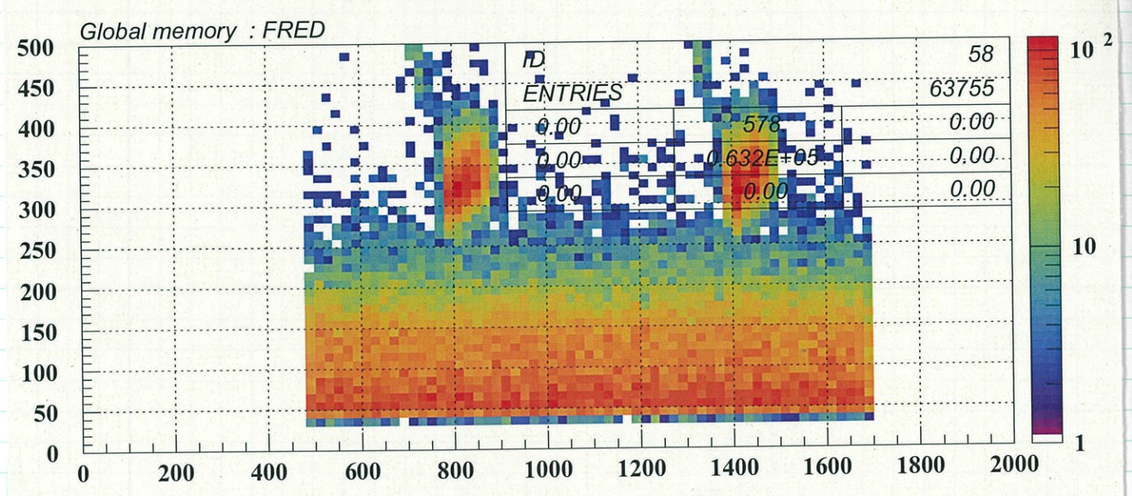
実験開始時のビームスポット

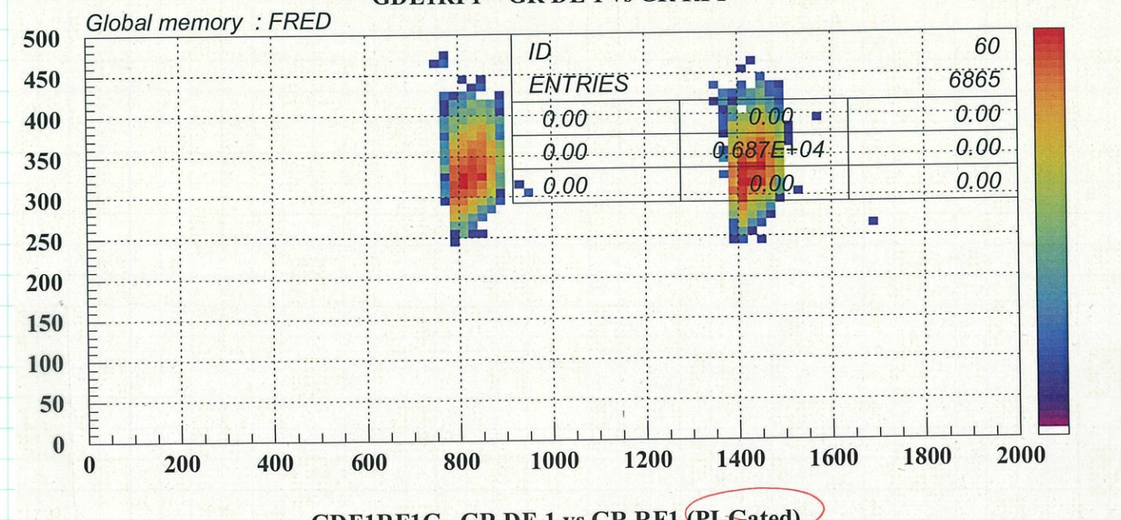
7/12/16 10.59



proton
GR_PI gate
ETC.

7/12/16 10.58





drift time → distance に変換.

VDC efficiency

X1	0.9466	
U1	0.9466	
X2	0.9726	
U2	0.8987	← U2が少し低い.
Total	0.7833	

(運転当初の方)
U1の ~~dirty~~ ch15 が抜けている.

今までの磁場

WS Magnets: Sat Dec 16 11:13:02 JST 2017

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1		91.400	A				
GR SX		17.600	A				
GR Q2		8.257	A				
GR D1		221.876	A	837.405	837.406	mT	FB
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2	417.865	417.785	A	837.405	837.394	mT	FB
GR DSR	0	0.054	A	0	Error	mT	FB
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments
Run 9999: free run for LED calibration

Messages
2017/12/16 11:13:01 Opening tag: GR.D1.NMR
2017/12/16 11:13:01 Opening a stream to nmrbrown.rcnp.osaka-u.ac.jp/192.168.2.201:100
2017/12/16 11:13:02 Opening tag: GR.D2.NMR
2017/12/16 11:13:02 Opening a stream to nmrred.rcnp.osaka-u.ac.jp/192.168.2.202:10001
2017/12/16 11:13:02 Closing the stream to nmrbrown.rcnp.osaka-u.ac.jp/192.168.2.201:1

Update 10.0 sec | Save... | Load... | Page Setup... | Print... | Close

今までの磁場 設定値

File Option Hcopy Queue '17/12/16 11:13

Reaction

27 Al (1 H , 1 H) 27 Al

Incident energy			295	MeV
Excitaion energy			30	MeV
Angle (lab.) ◇ Energy			4.5	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			753.143	MeV/c
Rho			300	cm
Raito			100	%
Rho (DSR)	◆ 0	◇ +	◇ -	
Q1	0	%	91.369	A
SX			17.678	A
Q2			8.256	A
D1	837.405	mT	222.750	A
D2	837.405	mT	417.865	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

VDCにあまりまもの物が入ってきていない？
もうすこし低励起側を見るように磁場を変える

変更1後の磁場

File Option Hcopy Queue '17/12/16 11:23

Reaction

27 Al (1 H , 1 H) 27 Al

Incident energy			295	MeV
Excitaion energy			10	MeV
Angle (lab.) ◇ Energy			4.5	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			784.755	MeV/c
Rho			300	cm
Raito			100	%
Rho (DSR)	◆ 0	◇ +	◇ -	
Q1	0	%	95.204	A
SX			18.420	A
Q2			8.603	A
D1	872.553	mT	232.099	A
D2	872.553	mT	435.404	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

WS Magnets: Sat Dec 16 11:23:03 JST 2017

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	95.204	95.300	A				
GR SX	18.420	18.300	A				
GR Q2	8.603	8.257	A				
GR D1	232.099	231.341	A	872.553	872.570	mT	FB
GR MQ		0.000	A				
GR MS		0.366	A				
GR D2	435.404	435.895	A	872.553	872.521	mT	FB
GR DSR	0	0.054	A	0	Error	mT	FB
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

変わっていなかった。

Comments

Run 9999: free run for LED calibration

Messages

```
2017/12/16 11:23:02 Pending opening connection (10 sec) due to the following previous
Could not open a connection to nmrorange.rcnp.osaka-u.ac.jp/192.168.2.203:10001.
The network to the device is not working or the device is locked by another process.
java.net.SocketTimeoutException: connect timed out
2017/12/16 11:23:02 Insufficient accuracy of the device GR.DSR.NMR
```

Update 10.0 sec | Save... | Load... | Page Setup... | Print... | Close

Plasticでは見えているのに、

VDCではほとんどhitしていない。

PI-gateをはずしても変化なし。

Plastic

1R	1800	→	1700V
1L	1800	→	1700V
2R	1800	→	1700V
2L	1800	→	1700V

に変更

Plasticでのゴミは大分減った。

~~[illegible]~~

11:33 VDC trip.

WS Magnets: Sat Dec 16 11:36:36 JST 2017

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	95.204	95.200	A				
GR SX	18.420	18.300	A				
GR Q2	8.603	8.590	A				
GR D1	232.099	231.341	A	872.553	872.558	mT	FB
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2	435.404	435.392	A	872.553	872.550	mT	FB
GR DSR	0	0.054	A	0	Error	mT	FB
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Q2を正しく合わせた。

Comments

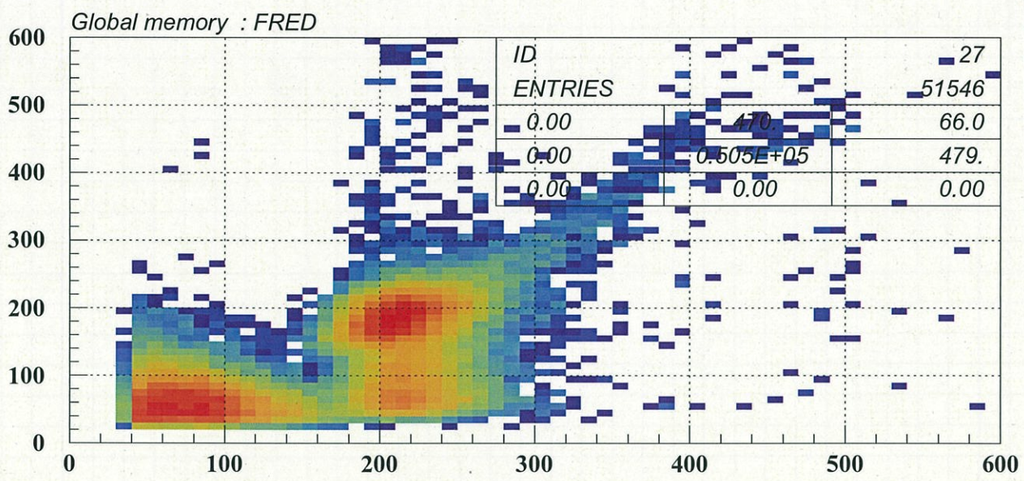
Run 9999: free run for LED calibration

Messages

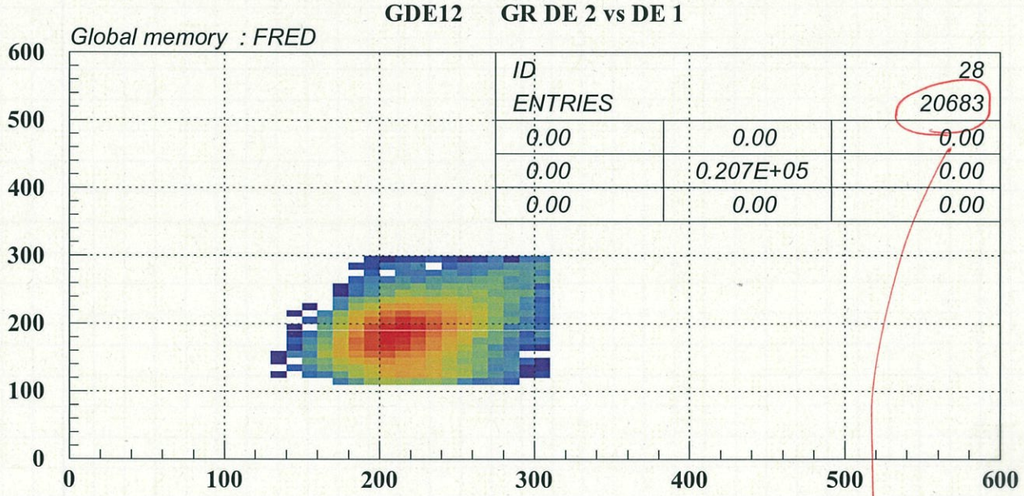
```
2017/12/16 11:36:33 Could not open a connection to nmrorange.rcnp.osaka-u.ac.jp/192.1
The network to the device is not working or the device is locked by another process.
java.net.SocketTimeoutException: connect timed out
2017/12/16 11:36:35 Opening tag: LAS.D.NMR
2017/12/16 11:36:35 No reply from the device LAS.D.NMR.
```

Update 10.0 sec | Save... | Load... | Page Setup... | Print... | Close

2017/12/16 11.38



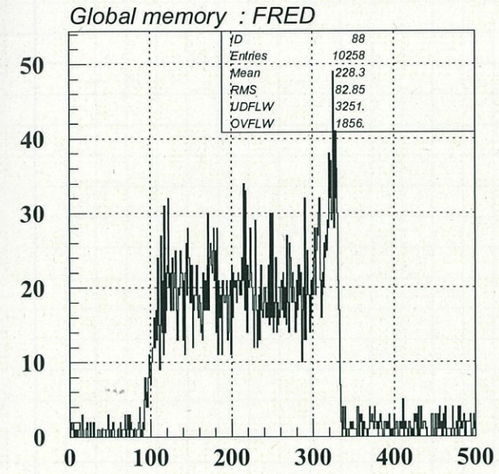
GDE12 GR DE 2 vs DE 1

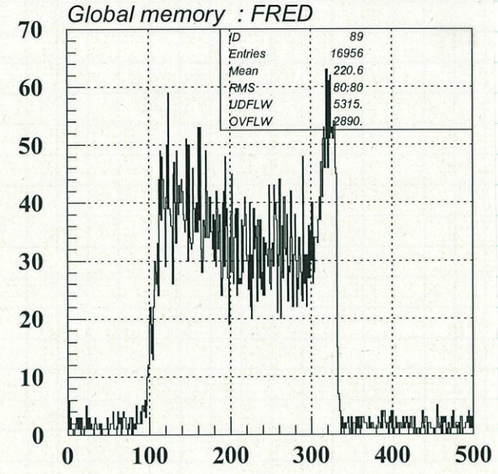


GDE12G GR DE 2 vs DE 1 (PI-Gated)

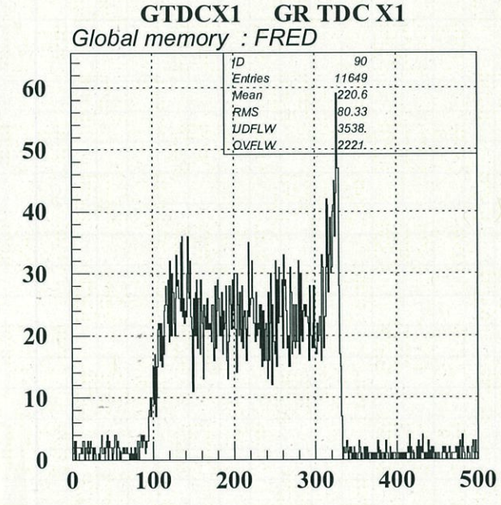
PI後のイベント数

17/12/16 11.38



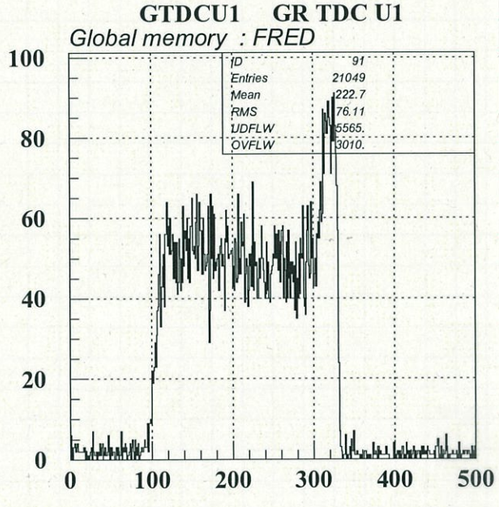


GTDCX1 GR TDC X1



GTDCX2 GR TDC X2

GTDCU1 GR TDC U1

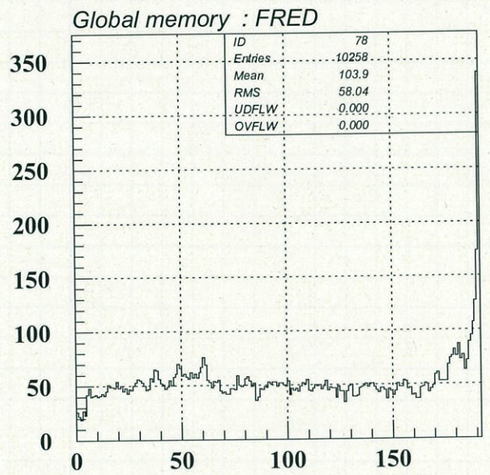


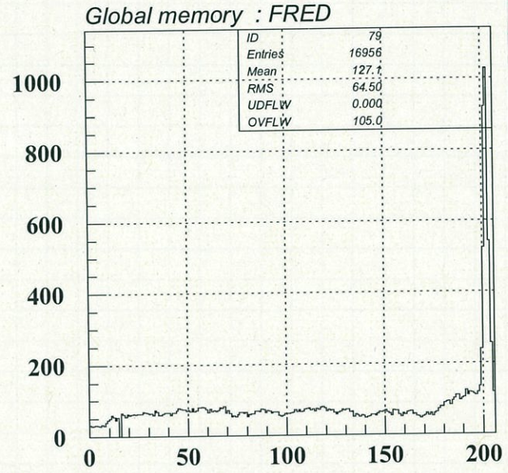
GTDCU2 GR TDC U2

→ TDCの鳴っている数が多い

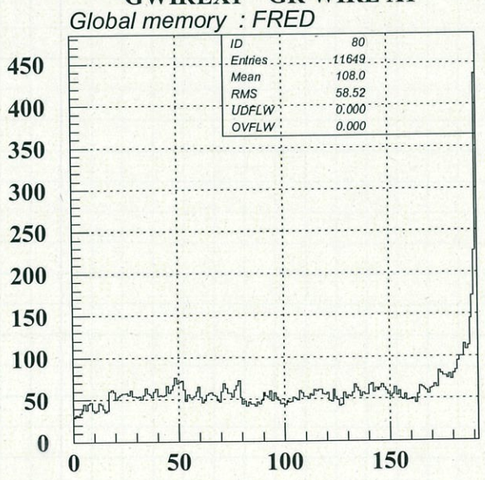
~~よりかならずelasticを見る~~.

2017/12/16 11.39

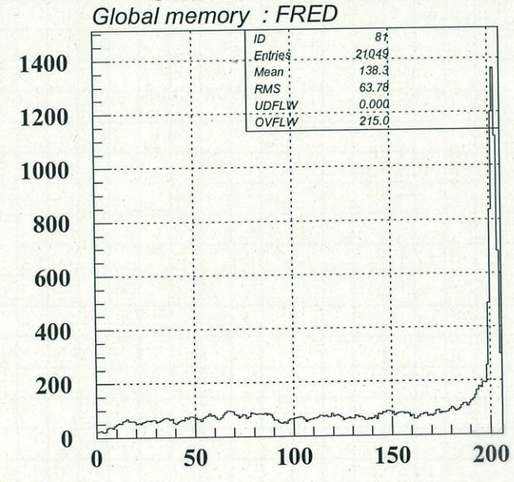




GWIREX1 GR WIRE X1



GWIREU1 GR WIRE U1



GWIREX2 GR WIRE X2

GWIREU2 GR WIRE U2

磁場を elastic 用に変更.

WS Magnets: Sat Dec 16 11:43:47 JST 2017

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	97.085	97.100	A				
GR SX	18.783	18.700	A				
GR Q2	8.772	8.767	A				
GR D1	232.099	236.073	A	889.790	889.768	mT	FB
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2	435.404	444.447	A	889.790	889.775	mT	FB
GR DSR	0	0.054	A	0	Error	mT	FB
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments

Run 9999: free run for LED calibration

→ ~~まとも~~ にVDCに hit する様子

よりになった.

Plastic 30000 に対し

VDC 17000 程度.

efficiency

X1 0.9064

U1 0.9402

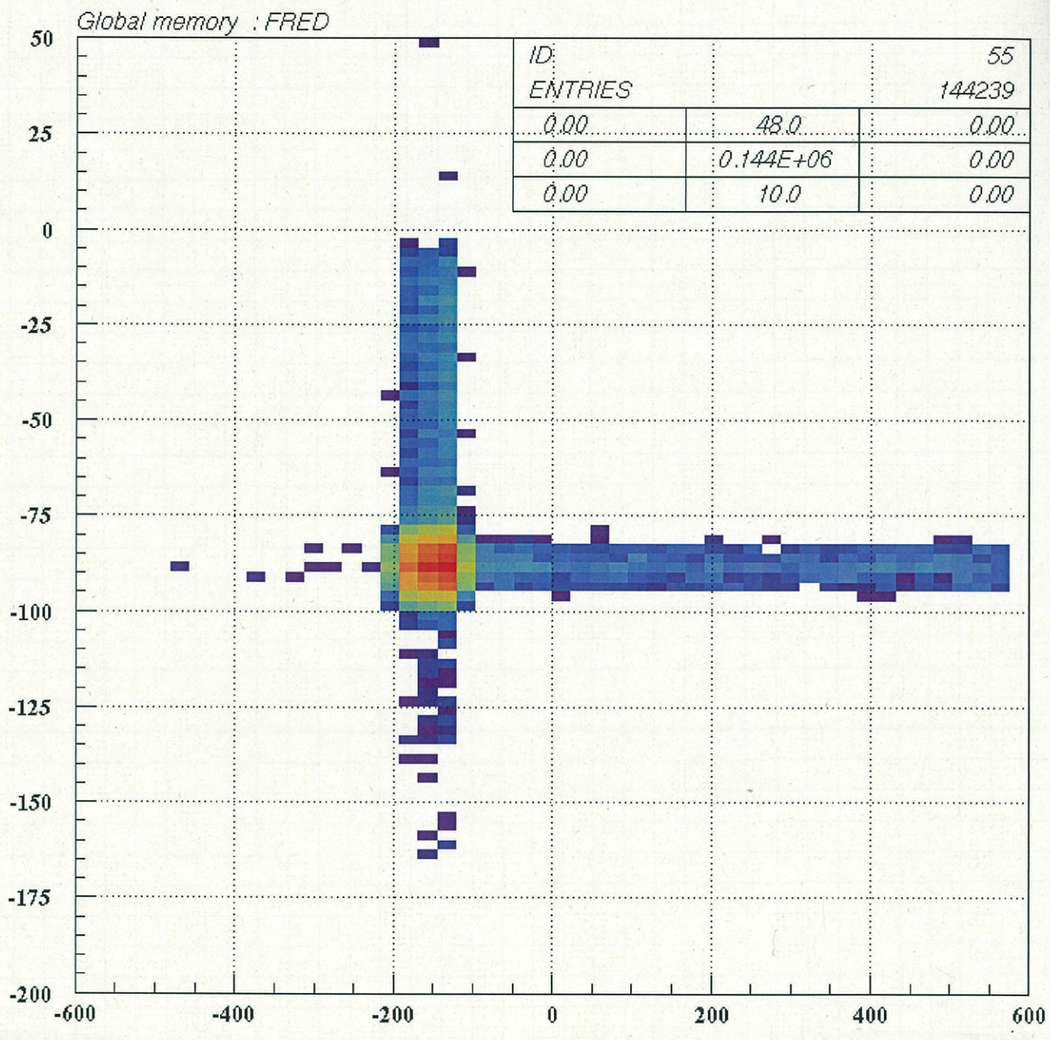
X2 0.9529

U2 0.9426

Total 0.8246

Before

2017/12/16 11.50

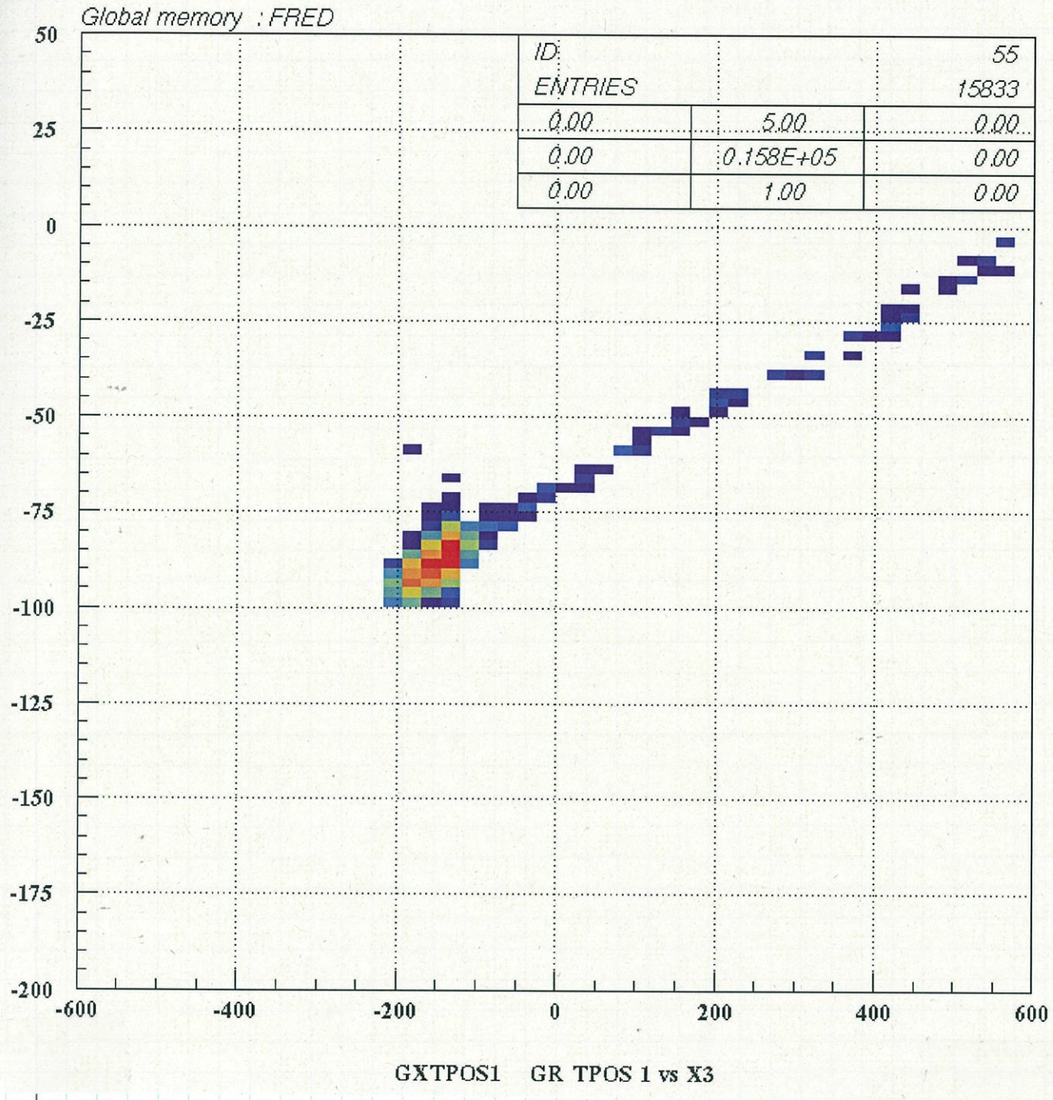


GRとVDCの相関がとれていない
イベントずれ

PAQをSTOPに再度START
(event builderを走らせなおしたことになる)
→相関がとれるようになた

After

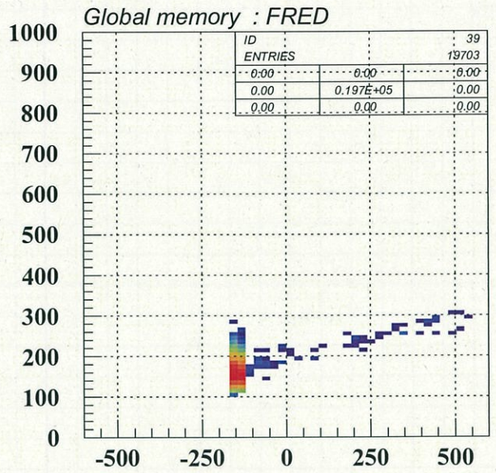
2017/12/16 11.52



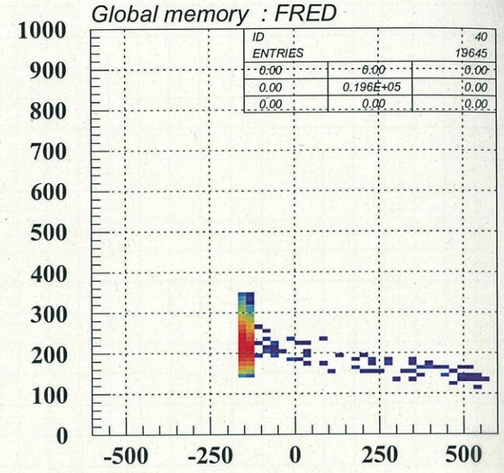
OK.
Plasticでとれたもののうち
9割程度はVDCでとれる
ようになった.

2017/12/16 11.58

Global memory : FRED

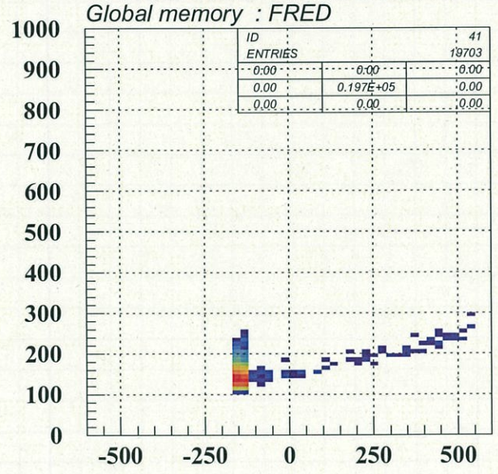


Global memory : FRED



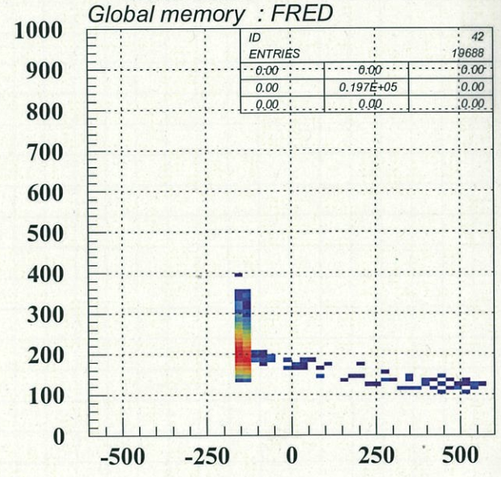
GXADC1LG GR ADC 1L vs X

Global memory : FRED



GXADC1RG GR ADC 1R vs X

Global memory : FRED



GXADC2LG GR ADC 2L vs X

GXADC2RG GR ADC 2R vs X

反応場を高励起状態を見るように変更する。

File Option Hcopy Queue '17/12/16 12:04

Reaction

27 Al (1 H , 1 H) 27 Al

Incident energy	295	MeV
Excitaion energy	15	MeV
◆ Angle (lab.) ◇ Energy	4.5	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			776.930	MeV/c
Rho			300	cm
Raito			100	%
Rho (DSR)		◆ 0	◇ +	◇ -
Q1	0	%	94.255	A
SX			18.236	A
Q2			8.517	A
D1	863.853	mT	229.785	A
D2	863.853	mT	431.063	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

WS Magnets: Sat Dec 16 12:03:01 JST 2017

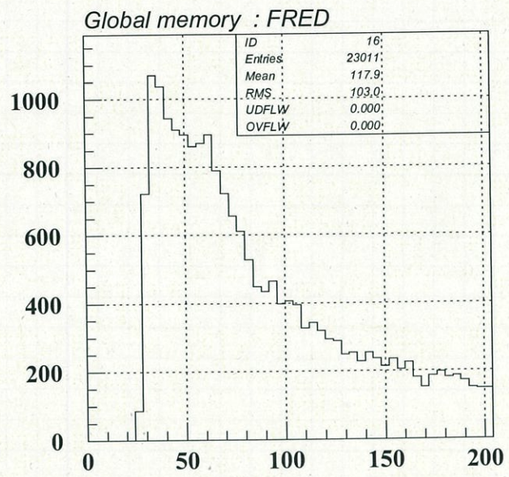
WS Magnets | HIPIS

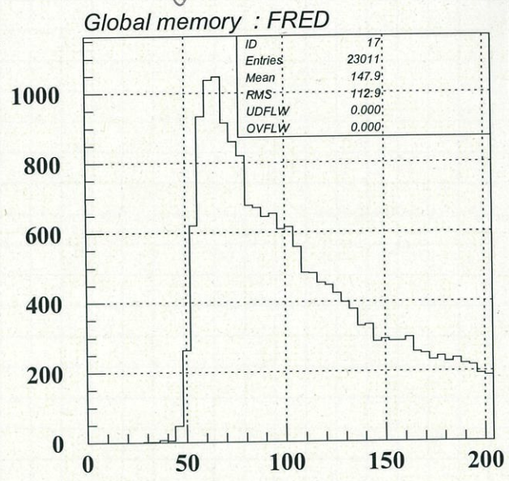
	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	94.255	94.300	A				
GR SX	18.236	18.100	A				
GR Q2	8.517	8.523	A				
GR D1	230	228.835	A	863.853	863.866	mT	FB
GR MQ		0.000	A				
GR MS		0.256	A				
GR D2	430	430.864	A	863.853	863.863	mT	FB
GR DSR	0	0.054	A	0	Error	mT	FB
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments

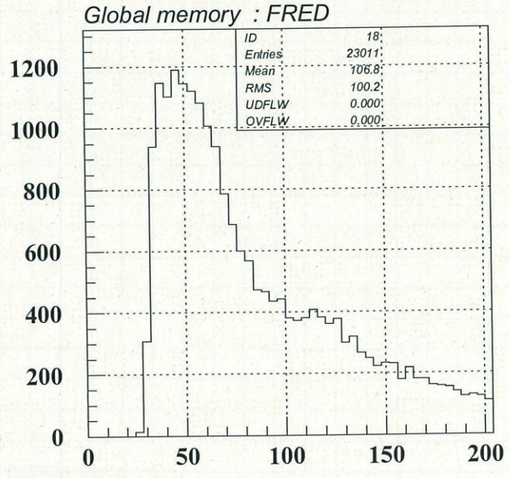
Run 9999: free run for LED calibration

2017/12/16 12.07

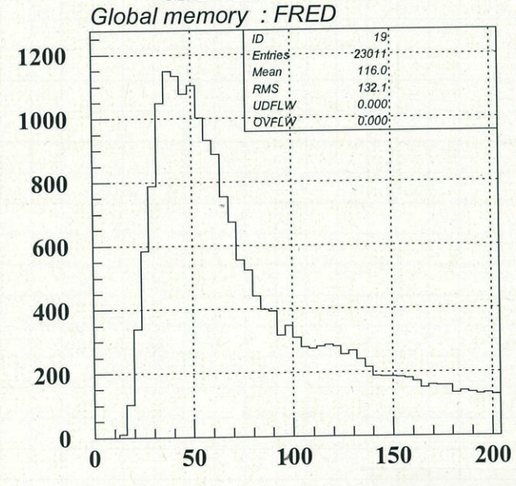




GADC1L GR ADC 1L



GADC1R GR ADC 1R



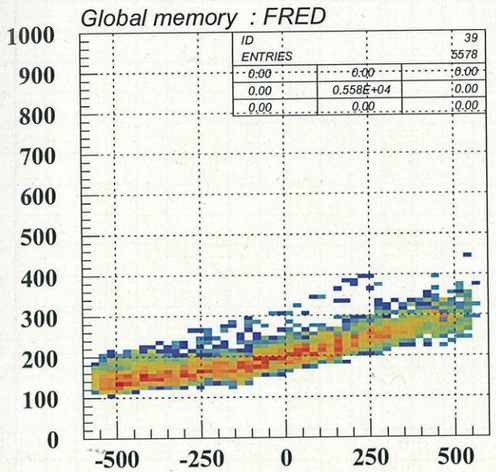
GADC2L GR ADC 2L

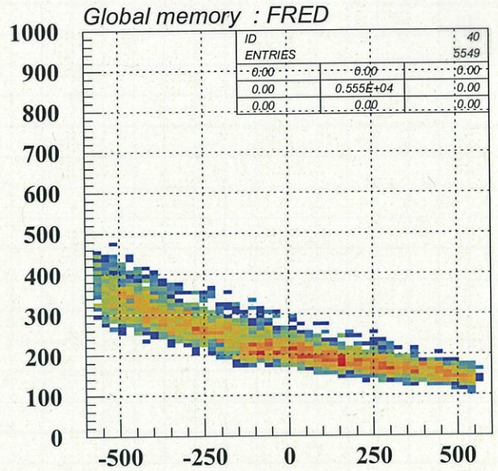
GADC2R GR ADC 2R

(PI gate なし)

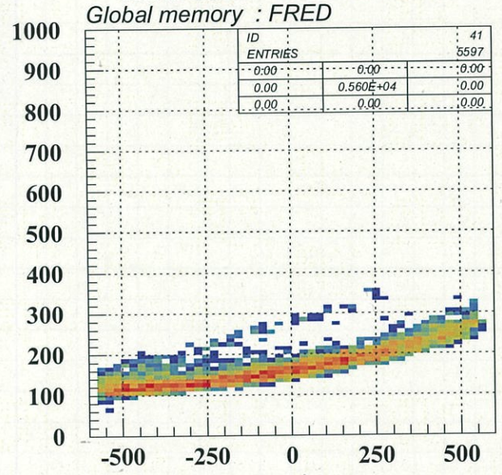
threshold はこのままで OK.

2017/12/16 12.08

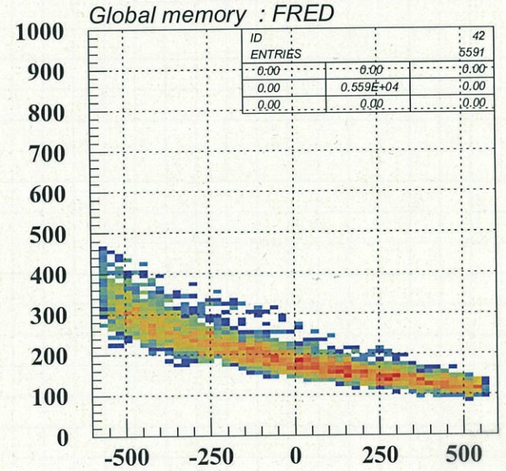




GXADC1LG GR ADC 1L vs X



GXADC1RG GR ADC 1R vs X



GXADC2LG GR ADC 2L vs X

GXADC2RG GR ADC 2R vs X

PI gate あり
(proton)

APC 100ch ~

HV: Sat Dec 16 12:09:38 JST 2017

HV FPP #00–15 | HV FPP #16–31 | COMMENT Timer | HV BLP #16–31 | HV LAS #00–15 | HV LAS #16–31 | HV GR #00–15 | HV GR #16–31 | HV BLP #00–15

	REFERENCE	PRESET	ACTUAL	
HV GR 00			0	V
HV GR 01			0	V
HV GR 02			0	V
HV GR 03			0	V
00–GR Scintillator #1 L		1700	1700	V
01–GR Scintillator #1 R		1700	1700	V
02–GR Scintillator #2 L		1700	1700	V
03–GR Scintillator #2 R		1700	1700	V
08–AKIMUNE L			0	V
09–AKIMUNE R			0	V
10–AKIMUNE U			0	V
11–AKIMUNE D			0	V
HV GR 12			0	V
HV GR 13			0	V
HV GR 14			0	V
HV GR 15			0	V
---COMMON---				

Update 3600.0 sec

Plastic の HV 設定値

Ex22 value ((p,p') proton 295MeV)

(carbonで決めてない)

25.6 keV/mm.

VDC の T-X 補正用に データを落とす.

Run 6001

27Al target, GR 4.5deg,
VDC C 5.7kV, P 0.3kV,
DI = 863.853 mT

Beam Current 1nA.

VDC efficiency

X1 0.95
U1 0.94
X2 0.94
U2 0.92
Total 0.78

Ratemeters

Run: 6001 (RUNNING)
Comment: 27Al target, GR 4.5 deg, VDC C5.7 kV, P 0.3 kV, D1=863.853mT
From: 2017/12/16 12:15:53
To: 2017/12/16 12:15:54
Duration: 1.0 sec
Spin: UP
BLP1: OUT
BLP2: OUT
BI Range: 6.00 nA
Beam Current: 1.05 nA
GR Live: 93.6 %
LAS Live: 97.7 %
Clock Live: 94.3 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	175.8	166.7	→
1	GR Trigger	372.5	353.1	→
2	GR Trigger Live	348.7	330.5	→
3	GR Clock	10,000.0	9,479.3	→
4	GR Clock Live	9,434.8	8,943.5	→
5	Broken Channel	0.0	0.0	→
6	LAS Trigger Live	976.5	925.6	→
7	LAS Clock	10,000.0	9,479.3	→
8	LAS Clock Live	9,437.8	8,946.3	→
9	GR Singles Event	348.7	330.5	→
10	LAS Singles Event	976.5	925.6	→
11	GR-LAS Coincidence	0.0	0.0	→
12	LAS Singles Sampling	976.5	925.6	→
13	LAS Trigger	999.3	947.3	→
14	GR Singles Sampling	348.7	330.5	→
15	GR Trigger (500nsec)	0.0	0.0	→
16	BLP1 Left	0.0	0.0	→
17	BLP1 Right	0.0	0.0	→
18	BLP1 Up	0.0	0.0	→
19	BLP1 Down	0.0	0.0	→
20	BLP1 Left Chance	0.0	0.0	→
21	BLP1 Right Chance	0.0	0.0	→
22	BLP1 Up Chance	0.0	0.0	→
23	BLP1 Down Chance	0.0	0.0	→
24	BLP2 Left	0.0	0.0	→
25	BLP2 Right	0.0	0.0	→
26	BLP2 Up	0.0	0.0	→
27	BLP2 Down	0.0	0.0	→
28	BLP2 Left Chance	0.0	0.0	→
29	BLP2 Right Chance	0.0	0.0	→
30	BLP2 Up Chance	0.0	0.0	→
31	BLP2 Down Chance	0.0	0.0	→
32	BLP Clock	0.0	0.0	→
33	BLP Clock Live	0.0	0.0	→
34	BLP Trigger	0.0	0.0	→
35	BLP Trigger Live	0.0	0.0	→
36	Akimune Up	0.0	0.0	→
37	Akimune Down	0.0	0.0	→
38	Akimune Left	0.0	0.0	→
39	Akimune Right	0.0	0.0	→
40	BLM#1 QM5D	1.0	0.9	→
41	BLM#2 QM6U	0.0	0.0	→
42	BLM#3 SX1	0.0	0.0	→
43	GR Scintillator 1	0.0	0.0	→
44	BI Range #0	0.0	0.0	→
45	BI Range #1	10,000.0	9,479.3	→
46	BI Range #2	10,000.0	9,479.3	→
47	BI Range #3	10,000.0	9,479.3	→
48	AVF BLP BI	0.0	0.0	→
49	AVF BLP Left	0.0	0.0	→
50	AVF BLP Right	0.0	0.0	→
51	AVF BLP Up	0.0	0.0	→
52	AVF BLP Down	0.0	0.0	→
53	V830 Test #5	0.0	0.0	→
54	V830 Test #6	0.0	0.0	→
55	V830 Test #7	0.0	0.0	→
56	V830 Test #8	0.0	0.0	→
57	V830 Test #9	0.0	0.0	→
58	V830 Test #10	0.0	0.0	→
59	V830 Test #11	0.0	0.0	→
60	V830 Test #12	0.0	0.0	→
61	V830 Test #13	0.0	0.0	→
62	V830 Test #14	0.0	0.0	→
63	V830 Test #15	0.0	0.0	→
64	V830 Test #16	175.8	166.7	→
65	V830 Test #17	372.5	353.1	→
66	V830 Test #18	348.7	330.5	→
67	V830 Test #19	10,000.0	9,479.3	→
68	V830 Test #20	9,434.8	8,943.5	→
69	V830 Test #21	999.3	947.3	→
70	V830 Test #22	976.5	925.6	→
71	V830 Test #23	10,000.0	9,479.3	→
72	V830 Test #24	9,437.8	8,946.3	→
73	V830 Test #25	348.7	330.5	→
74	V830 Test #26	976.5	925.6	→
75	V830 Test #27	0.0	0.0	→
76	V830 Test #28	1.0	0.9	→
77	V830 Test #29	0.0	0.0	→
78	V830 Test #30	348.7	330.5	→
79	V830 Test #31	9.9	9.4	→

Scalers

Run: 6001 (STOPPED)
Comment: 27Al target, GR 4.5 deg, VDC C5.7 kV, P 0.3 kV, D1=863.853mT
From: 2017/12/16 12:15:24
To: 2017/12/16 12:21:50
Duration: 385.6 sec
BI Range: 6.00 nA
Beam Charge: 409.61 nC

Ch#	Name	Scaler SPIN UP	Scaler SPIN DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	34,028	34,241
1	GR Trigger	76,619	77,209
2	GR Trigger Live	72,100	72,629
3	GR Clock	1,922,935	1,932,934
4	GR Clock Live	1,810,767	1,820,359
5	Broken Channel	0	0
6	LAS Trigger Live	188,919	189,952
7	LAS Clock	1,922,935	1,932,934
8	LAS Clock Live	1,811,443	1,821,053
9	GR Singles Event	72,078	72,604
10	LAS Singles Event	188,897	189,927
11	GR-LAS Coincidence	22	25
12	LAS Singles Sampling	188,897	189,927
13	LAS Trigger	192,291	193,295
14	GR Singles Sampling	72,078	72,604
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0
20	BLP1 Left Chance	0	0
21	BLP1 Right Chance	0	0
22	BLP1 Up Chance	0	0
23	BLP1 Down Chance	0	0
24	BLP2 Left	0	0
25	BLP2 Right	0	0
26	BLP2 Up	0	0
27	BLP2 Down	0	0
28	BLP2 Left Chance	0	0
29	BLP2 Right Chance	0	0
30	BLP2 Up Chance	0	0
31	BLP2 Down Chance	0	0
32	BLP Clock	0	0
33	BLP Clock Live	0	0
34	BLP Trigger	0	0
35	BLP Trigger Live	0	0
36	Akimune Up	0	0
37	Akimune Down	0	0
38	Akimune Left	0	0
39	Akimune Right	0	0
40	BLM#1 QM5D	118	139
41	BLM#2 QM6U	68	79
42	BLM#3 SX1	13	20
43	GR Scintillator 1	0	0
44	BI Range #0	0	0
45	BI Range #1	1,922,938	1,932,935
46	BI Range #2	1,922,938	1,932,935
47	BI Range #3	1,922,938	1,932,935
48	AVF BLP BI	0	0
49	AVF BLP Left	0	0
50	AVF BLP Right	0	0
51	AVF BLP Up	0	0
52	AVF BLP Down	0	0
53	V830 Test #5	0	0
54	V830 Test #6	0	0
55	V830 Test #7	0	0
56	V830 Test #8	0	0
57	V830 Test #9	0	0
58	V830 Test #10	0	0
59	V830 Test #11	0	0
60	V830 Test #12	0	0
61	V830 Test #13	0	0
62	V830 Test #14	0	0
63	V830 Test #15	0	0
64	V830 Test #16	34,028	34,241
65	V830 Test #17	76,619	77,209
66	V830 Test #18	72,100	72,629
67	V830 Test #19	1,922,935	1,932,934
68	V830 Test #20	1,810,767	1,820,359
69	V830 Test #21	192,291	193,295
70	V830 Test #22	188,919	189,952
71	V830 Test #23	1,922,935	1,932,934
72	V830 Test #24	1,811,443	1,821,053
73	V830 Test #25	72,078	72,604
74	V830 Test #26	188,897	189,927
75	V830 Test #27	22	25
76	V830 Test #28	191	192
77	V830 Test #29	0	0
78	V830 Test #30	72,078	72,604
79	V830 Test #31	1,354	1,381

Target 金に変更

GR a Magnet を金a elastic に設定

File Option Hcopy Queue '17/12/16 12:30

Reaction

197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
◆ Angle (lab.) ◇ Energy	4.5	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			800.362	MeV/c
Rho			300	cm
Raito			100	%
Rho (DSR)		◆ 0	◇ +	◇ -
Q1	0	%	97.098	A
SX			18.786	A
Q2			8.774	A
D1	889.907	mT	236.715	A
D2	889.907	mT	444.063	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

WS Magnets: Sat Dec 16 12:30:06 JST 2017

WS Magnets | **HIPIS**

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	97.098	97.100	A				
GR SX	18.786	18.700	A				
GR Q2	8.774	8.767	A				
GR D1	230	236.212	A	889.907	889.893	mT	FB
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2	430	444.195	A	889.907	889.889	mT	FB
GR DSR	0	0.054	A	0	Error	mT	FB
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments

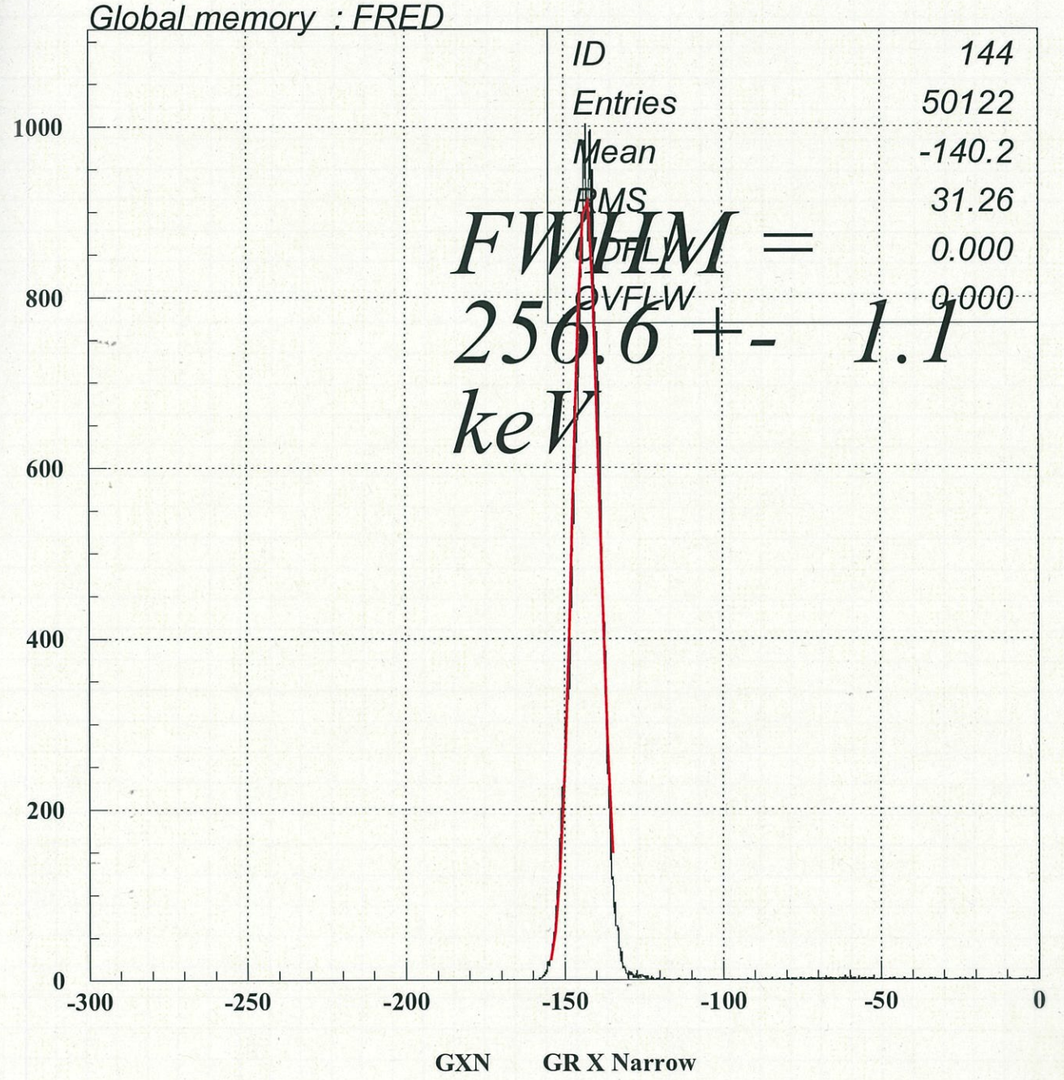
Run 6001: Stopped

Messages

```
2017/12/16 12:30:04 Closing the stream to nmrbrown.rcnp.osaka-u.ac.jp/192.168.2.201:1
2017/12/16 12:30:04 Opening tag: GR.DSR.NMR
2017/12/16 12:30:04 Retry to open a stream to nmrorange.rcnp.osaka-u.ac.jp/192.168.2.
2017/12/16 12:30:04 Closing the stream to nmrred.rcnp.osaka-u.ac.jp/192.168.2.202:100
2017/12/16 12:30:06 Opening tag: GR.DSR.NMR
```

Update 10.0 sec | Save... | Load... | Page Setup... | Print... | Close

2017/12/16 12.47



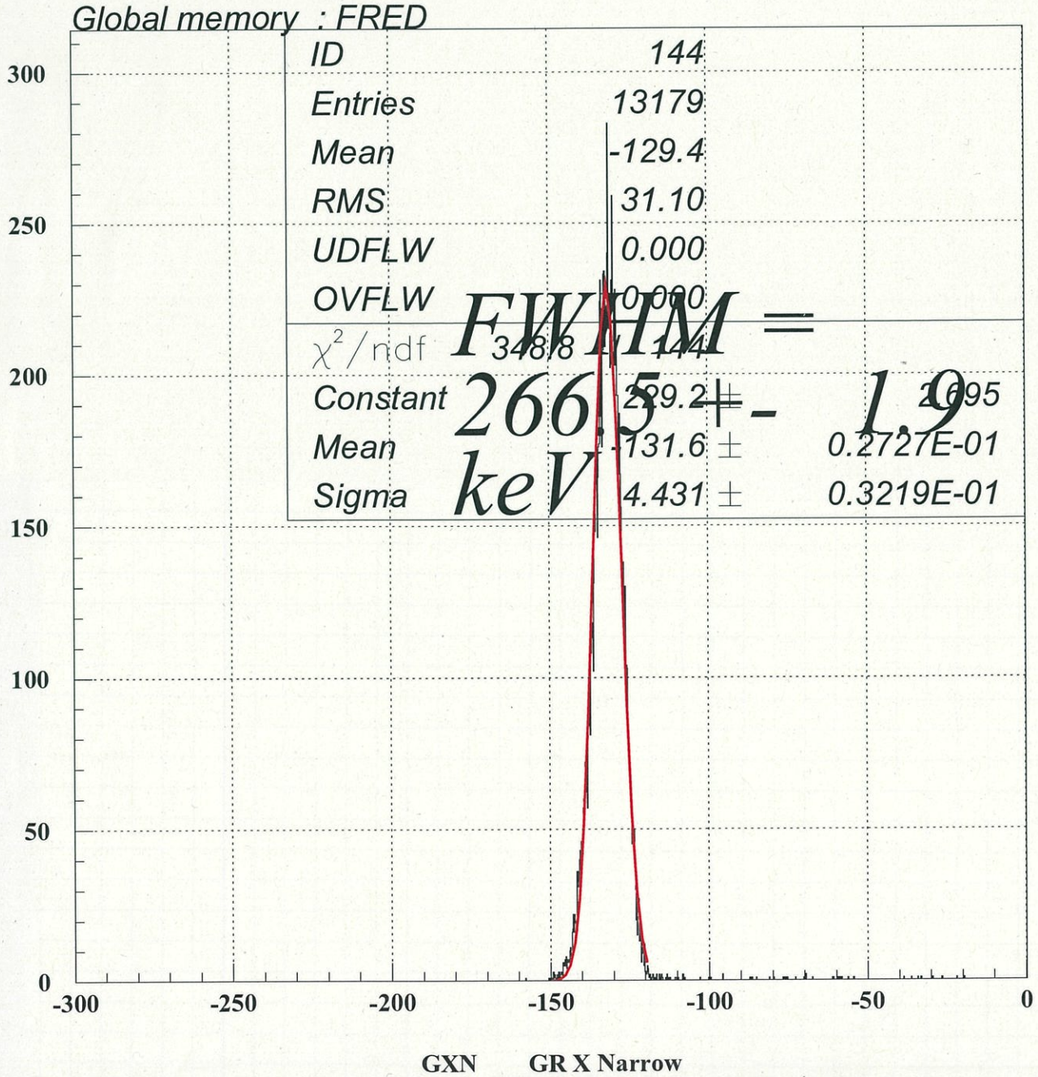
12/16
13:00

Beam の分解能を調整

Ringの電圧が動いて、Beamが変動した。

15分程度で回復する見込み。

2017/12/16 13.33



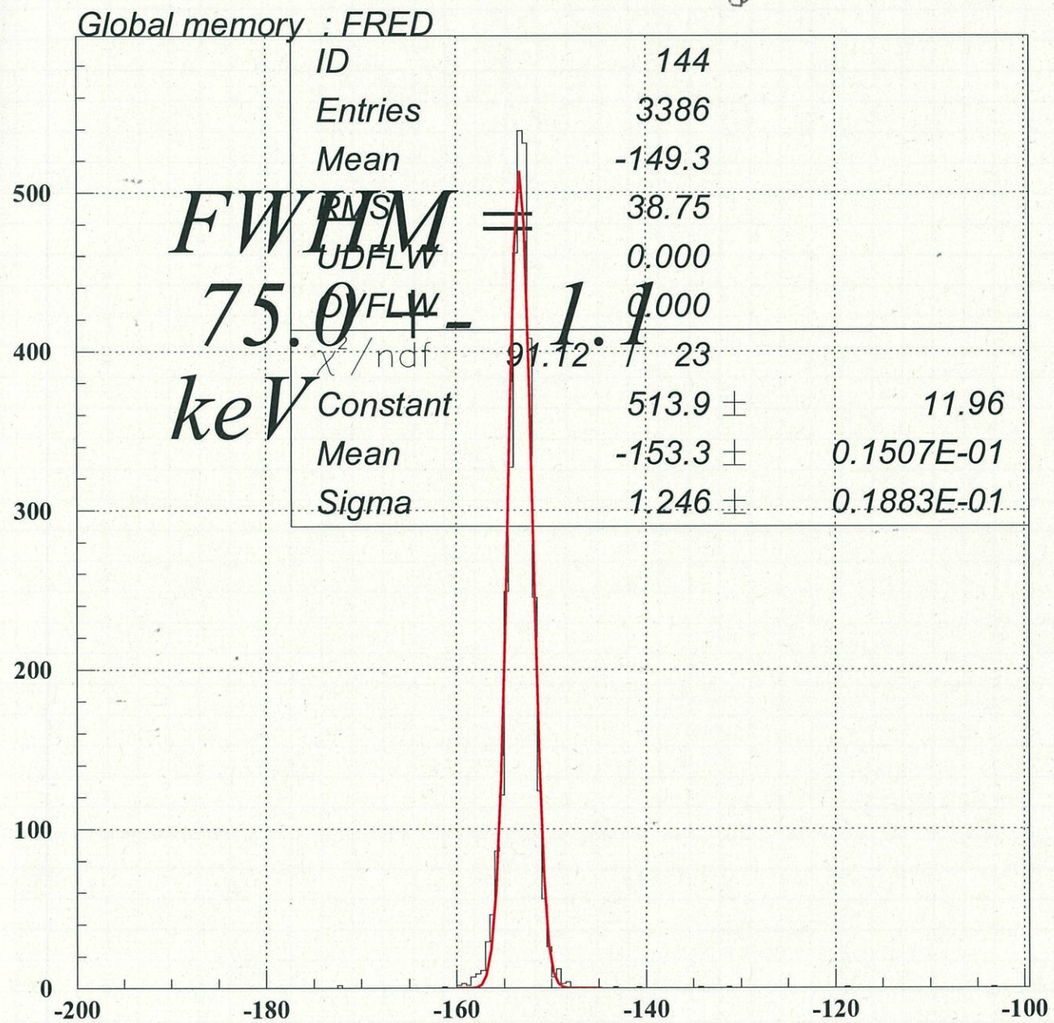
hp gxthe で、
X vs θ の傾き check

2
14:30
ごろ

FTの ~~f~~ phase を調整すると劇的に分解能が
よくなった。 (120 keV → 80 keV)
FWHM くらい

2017/12/16 14.57

−1 deg < θ < 1 deg



アクロマでの調整はこれで終わりにする

Run 6002

Au target, GR 4.5deg,
VDC C5.7kV, P 0.3kV
after resolution tuning,
achromatic mode

Ratemeters

Run:	6002 (RUNNING)
Comment:	Au target, GR 4.5 deg, VDC C5.7 kV, P 0.3 kV, after resolution tuning, achromatic mode
From:	2017/12/16 15:01:40
To:	2017/12/16 15:01:41
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.56 nA
GR Live:	92.4 %
LAS Live:	96.4 %
Clock Live:	92.6 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	93.4	166.7	→
1	GR Trigger	827.4	1,477.0	→
2	GR Trigger Live	764.8	1,365.2	→
3	GR Clock	10,000.0	17,851.1	→
4	GR Clock Live	9,262.0	16,533.7	→
5	Broken Channel	0.0	0.0	→
6	LAS Trigger Live	964.4	1,721.6	→
7	LAS Clock	10,000.0	17,851.1	→
8	LAS Clock Live	9,267.0	16,542.6	→
9	GR Singles Event	764.8	1,365.2	→
10	LAS Singles Event	964.4	1,721.6	→
11	GR-LAS Coincidence	0.0	0.0	→
12	LAS Singles Sampling	964.4	1,721.6	→
13	LAS Trigger	1,000.2	1,785.5	→
14	GR Singles Sampling	764.8	1,365.2	→

15:20 西実験室入室。

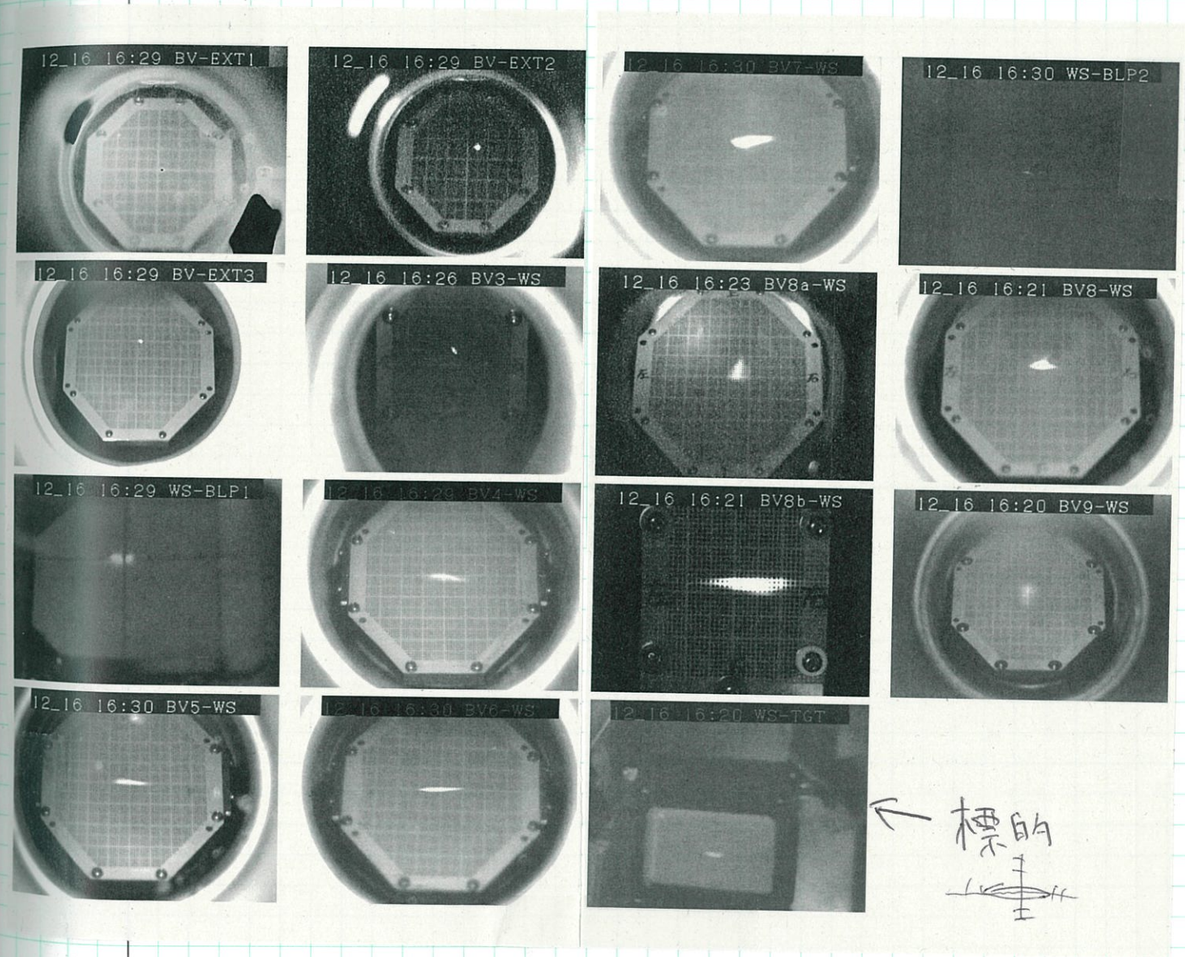
- ビームを dispersive に切りかえる前に
GR を 0度に回し Q1FC で
ビームを止められることを確認する

	変更前		変更後
GR	~~4.5 deg~~	→	0.0 deg
Q1FC	0.670 V	→	0.434 V

0.434 V ↑
e492 デバイスのトリガ
プロット他
目視確認で
おおよそビームライン上。

online のディレクトリの hist_def の
X モカーブを run 6001 から求めたものに更新した。

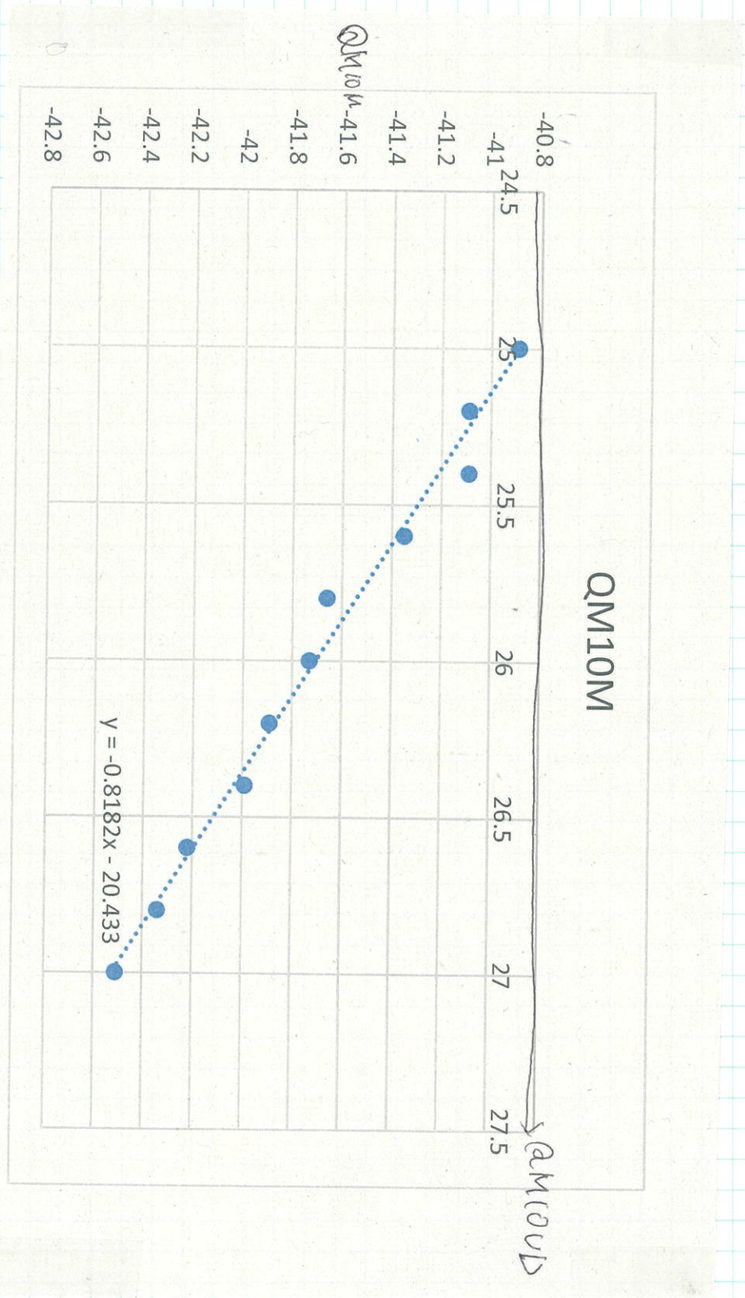
16:35 頃 ターゲットまでのトランスポート完了。



標的直前の3連Q (QM10)を調整して
縦方向の focus を取る。

標的にて
Viewerを見ながら縦方向のfocusが取れる
3連Qの電流の組み合わせを決めた

↓



fc=50%

QM10UD	QM10M
25	−40.89
25.2	−41.09
25.4	−41.09
25.6	−41.34
25.8	−41.66
26	−41.93
26.2	−41.89
26.4	−41.99
26.6	−42.22
26.8	−42.34
27	−42.51

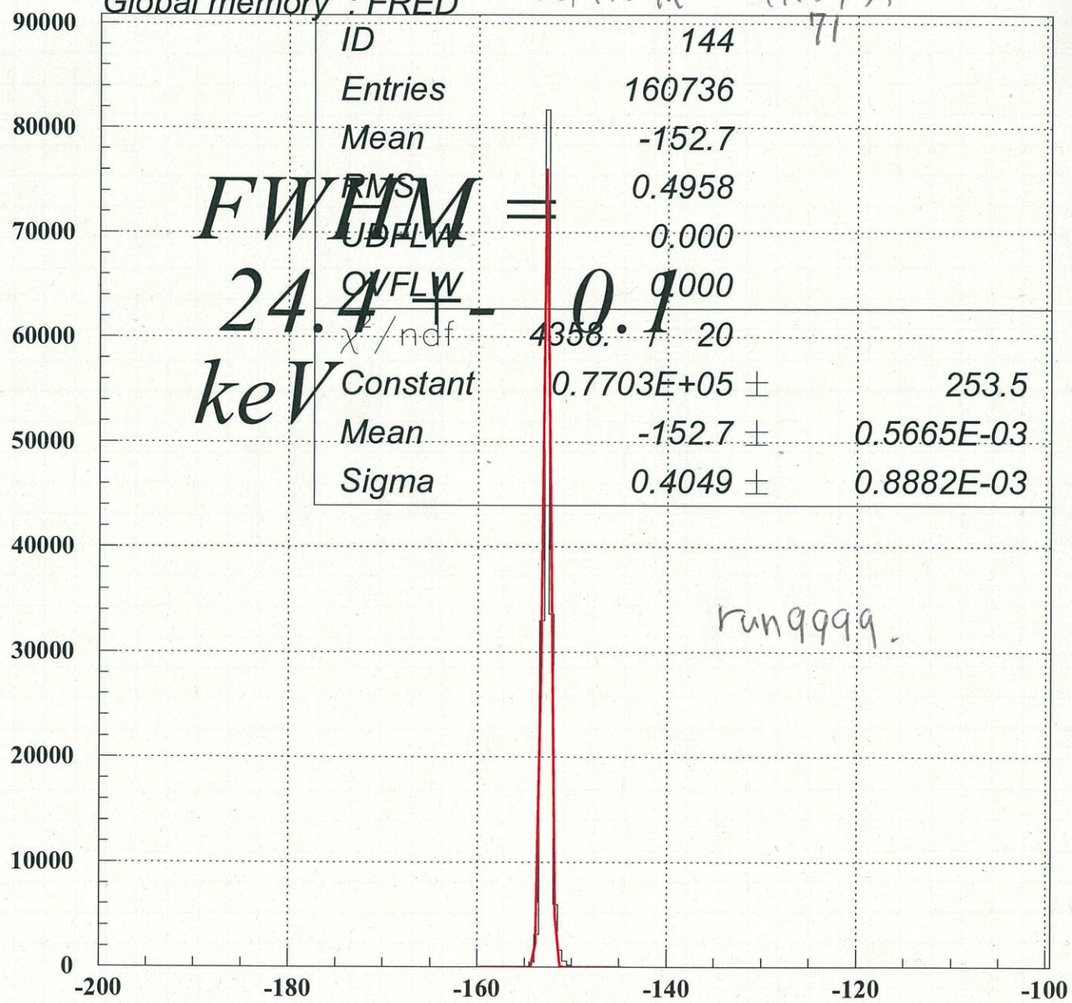
16:50 Q1FCを4.0°に移動

faint beamをGRに通す. (標的プラスチ)

トリガーレートが3kHzになるように調整.

20 2017/12/16 17.03

QM10UD 26.00 A
QM10M -41.~~57~~71 A



run6003 ここでデータを保存しておく:

FWHM 22.8 keV

QM10UD 26.00 A
QM10M -41.71 A

P.75の関係のもとで 26.00A ± 1.00 Aの範囲をスキャンして分解能を評価する.

run6004

QM10UD 25.20 A
QM10M -41.05 A.

→FWHM 14 keV だった.

より広い範囲で取ることにする.

run6005

QM10UD 25.00
QM10M -40.88

12.6 keV

run6006

QM10UD 24.80
QM10M -40.72

12.1 keV

極小?

run 6007

QM10 UD	24.60	A
QM10 M	-40.56	A

12.7 keV

run 6008

QM10UD	24.40	A
QM10 M	-40.40	A

14.8

σ_θ = 2 mrad

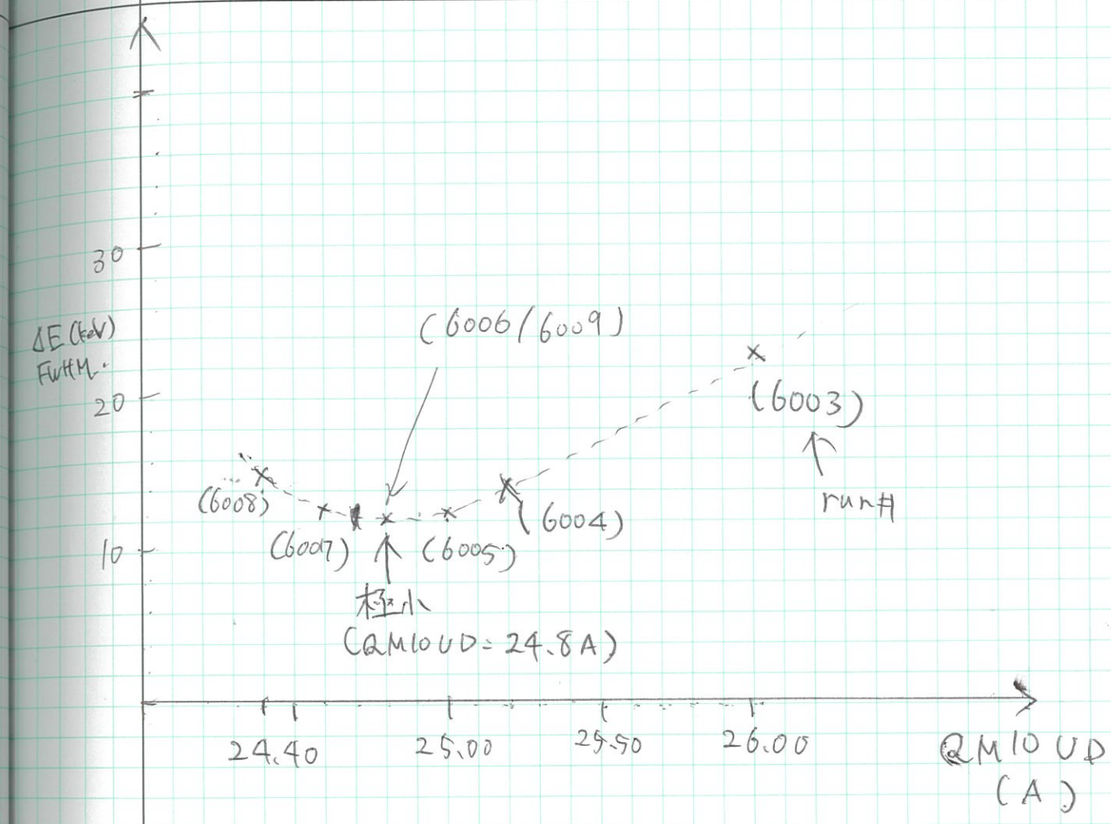
run 6009

QM10UD	24.80	A
QM10M	-40.72	A

↑ run 6006と同じ

11.0 keV

(gxn の bin幅を変えたので
run 6006より分解能がよく見えている)

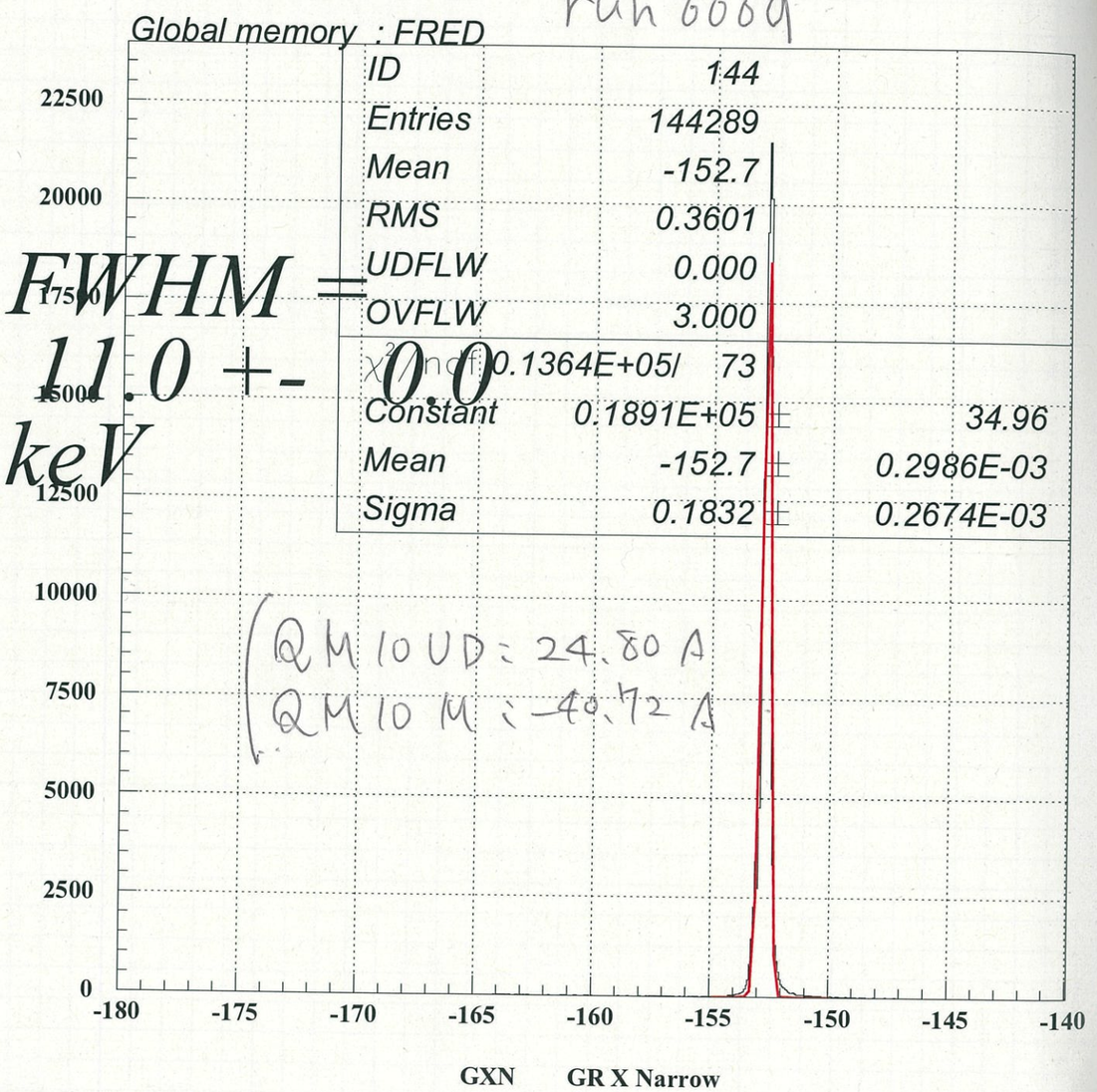


run#		QM10UD	QM10M	resolution
	6003	26	-41.71	23
	6008	24.4	-40.3971	14.8
	6007	24.6	-40.5607	12.7
6009	6006	24.8	-40.7244	12.4
	6005	25	-40.888	12.6
	6004	25.2	-41.0516	14
		25.4	-41.2153	
		25.6	-41.3789	
		25.8	-41.5426	
	6003	26	-41.7062	23

20

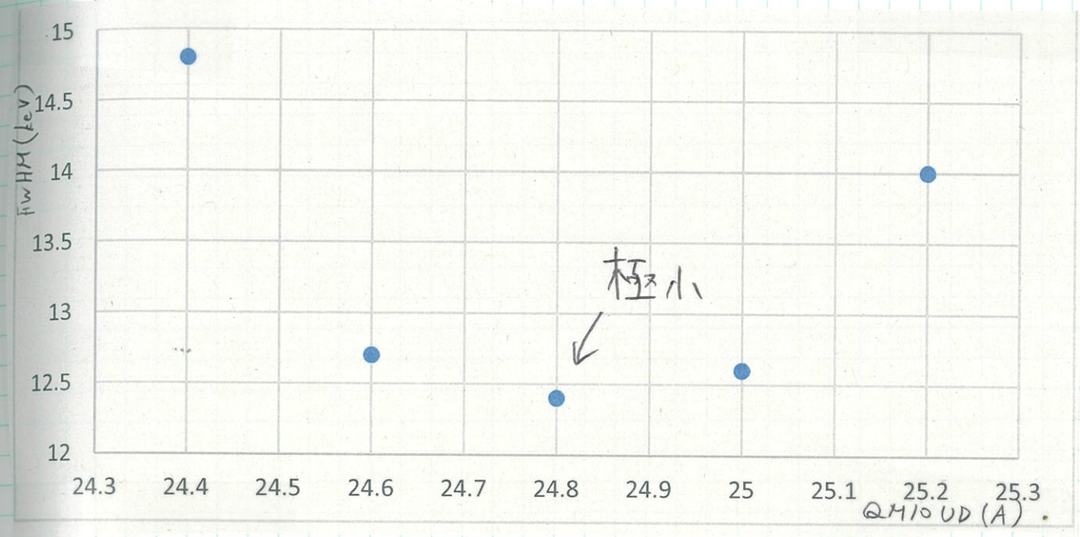
2017/12/16 17.34

run 6009



FWHM = 11.0 +- 0.0 keV

(QM10UD: 24.80 A
QM10M: -40.72 A



(P.80の図と同じ)

17:40 調整完了.

18:11 実験室準備完了(ファイバー遮光など).

Run 6011.

↘ 分解能 : 10.9 keV

Run 6010 は Junk

20

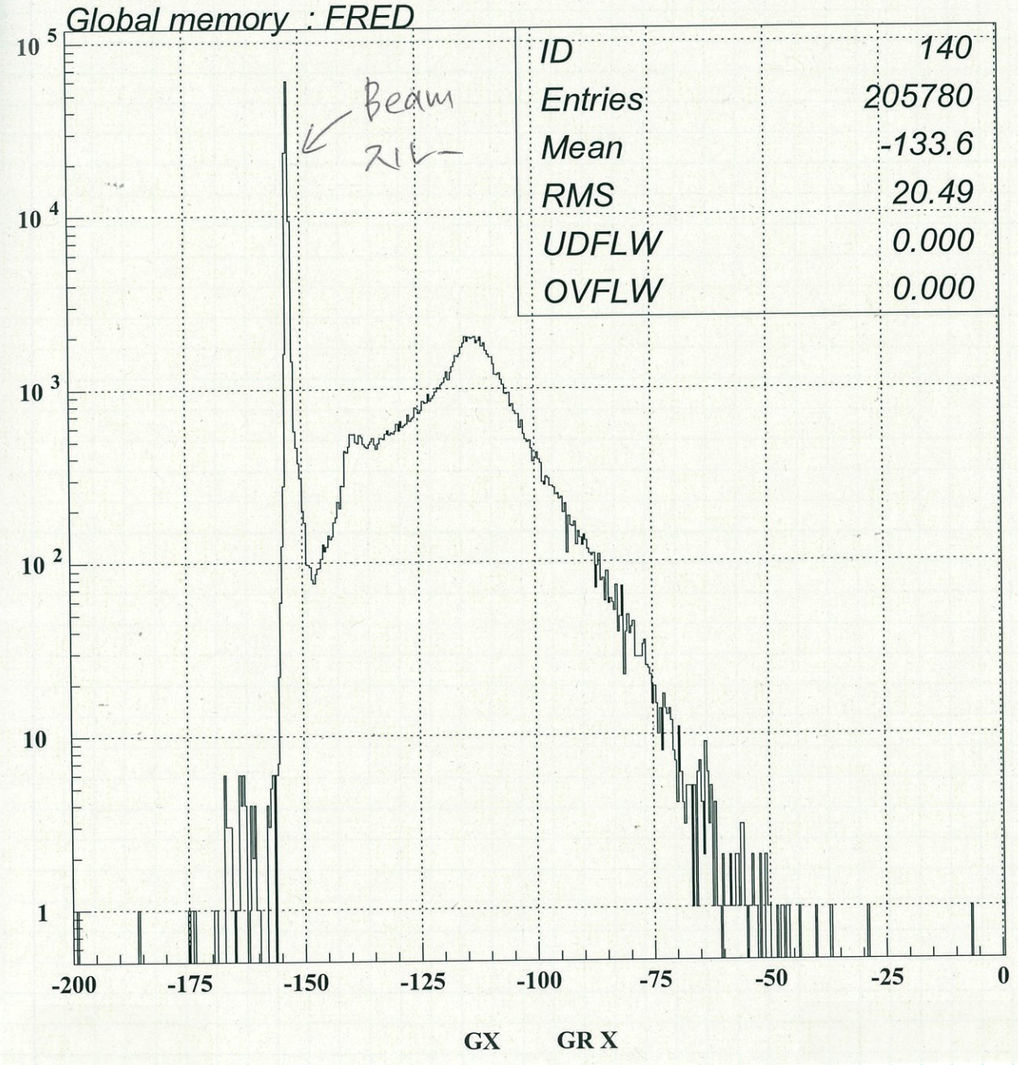
Ratemeters

Run:	6011 (RUNNING)
Comment:	blank target before measurement, QM10UD:24.8A, QM10M:-40.72A, GR 0.0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/16 18:11:17
To:	2017/12/16 18:11:18
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	75.1 %
LAS Live:	82.0 %
Clock Live:	79.4 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	5,337.2	Infinite	→
2	GR Trigger Live	4,007.2	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	7,939.8	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	819.5	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	7,956.7	Infinite	→
9	GR Singles Event	4,004.2	Infinite	→
10	LAS Singles Event	816.5	Infinite	→
11	GR-LAS Coincidence	3.0	Infinite	→
12	LAS Singles Sampling	816.5	Infinite	→
13	LAS Trigger	999.3	Infinite	→
14	GR Singles Sampling	4,004.2	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→
20	BLP1 Left Chance	0.0	NaN	→
21	BLP1 Right Chance	0.0	NaN	→
22	BLP1 Up Chance	0.0	NaN	→
23	BLP1 Down Chance	0.0	NaN	→
24	BLP2 Left	0.0	NaN	→
25	BLP2 Right	0.0	NaN	→
26	BLP2 Up	0.0	NaN	→

18:22 Target : ϕ 3mm center.
⇒ run # 60

017/12/16 18.22



Ratemeters

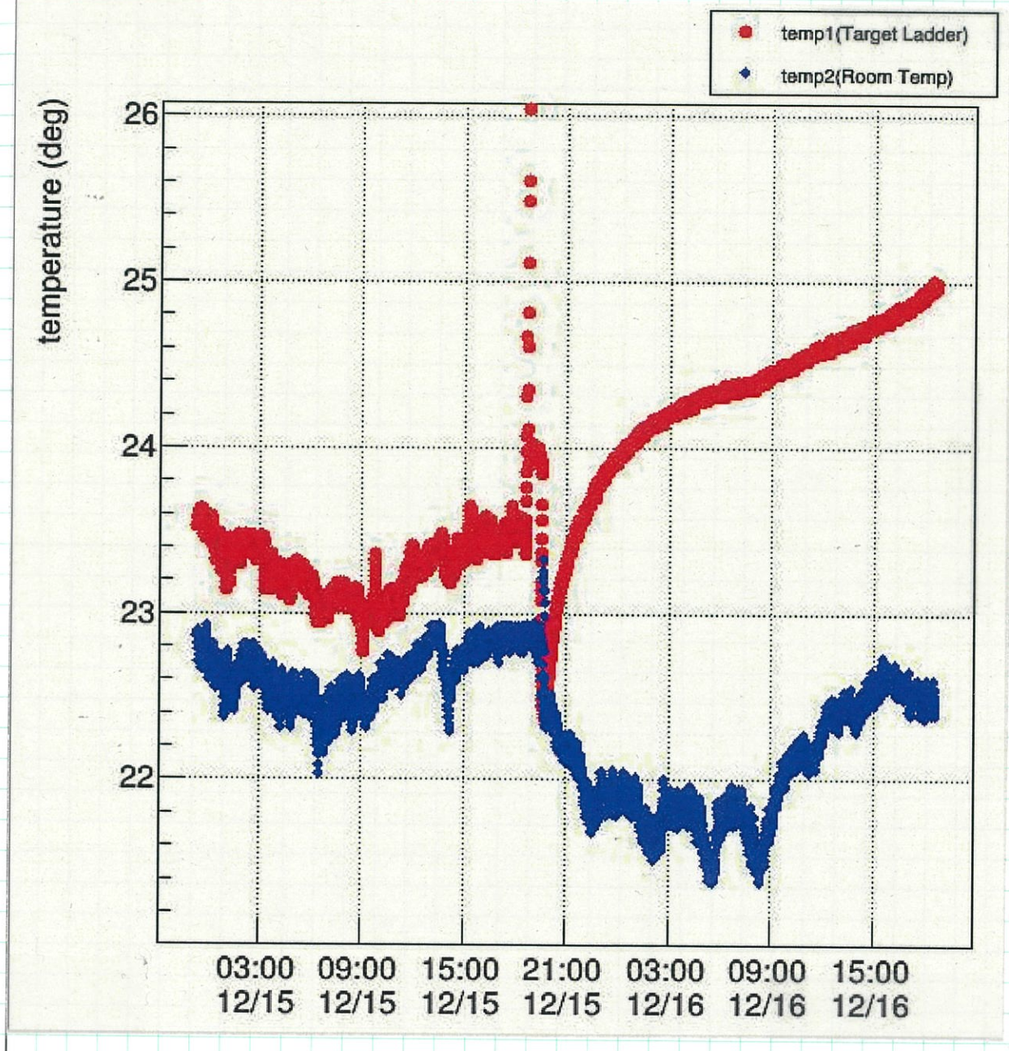
Run:	6012 (RUNNING)
Comment:	phi-3mm-C, QM10UD:24.8A, QM10M:-40.72A, GR 0.0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/16 18:22:44
To:	2017/12/16 18:22:45
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	79.9 %
LAS Live:	NaN %
Clock Live:	83.7 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	4,780.0	Infinite	→
2	GR Trigger Live	3,818.4	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	8,369.9	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	0.0	NaN	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	8,383.8	Infinite	→
9	GR Singles Event	3,818.4	Infinite	→
10	LAS Singles Event	0.0	NaN	→
11	GR-LAS Coincidence	0.0	NaN	→
12	LAS Singles Sampling	0.0	NaN	→
13	LAS Trigger	0.0	NaN	→
14	GR Singles Sampling	0.0	NaN	→
15	GR Trigger (500nsec)	3,818.4	Infinite	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→
20	BLP1 Left Chance	0.0	NaN	→
21	BLP1 Right Chance	0.0	NaN	→
22	BLP1 Up Chance	0.0	NaN	→
23	BLP1 Down Chance	0.0	NaN	→
24	BLP2 Left	0.0	NaN	→
25	BLP2 Right	0.0	NaN	→
26	BLP2 Up	0.0	NaN	→
27	BLP2 Down	0.0	NaN	→
28	BLP2 Left Chance	0.0	NaN	→
29	BLP2 Right Chance	0.0	NaN	→
30	BLP2 Up Chance	0.0	NaN	→
31	BLP2 Down Chance	0.0	NaN	→
32	BLP Clock	0.0	NaN	→
33	BLP Clock Live	0.0	NaN	→
34	BLP Trigger	0.0	NaN	→
35	BLP Trigger Live	0.0	NaN	→
36	Akimune Up	0.0	NaN	→
37	Akimune Down	0.0	NaN	→
38	Akimune Left	0.0	NaN	→
39	Akimune Right	0.0	NaN	→
40	BLM#1 QM5D	0.0	NaN	→
41	BLM#2 QM6U	0.0	NaN	→
42	BLM#3 SX1	0.0	NaN	→
43	GR Scintillator 1	0.0	NaN	→
44	BI Range #0	0.0	NaN	→
45	BI Range #1	10,000.0	Infinite	→
46	BI Range #2	10,000.0	Infinite	→
47	BI Range #3	10,000.0	Infinite	→
48	AVF BLP BI	0.0	NaN	→
49	AVF BLP Left	0.0	NaN	→
50	AVF BLP Right	0.0	NaN	→
51	AVF BLP Up	0.0	NaN	→
52	AVF BLP Down	0.0	NaN	→
53	V830 Test #5	0.0	NaN	→
54	V830 Test #6	0.0	NaN	→
55	V830 Test #7	0.0	NaN	→
56	V830 Test #8	0.0	NaN	→
57	V830 Test #9	0.0	NaN	→
58	V830 Test #10	0.0	NaN	→
59	V830 Test #11	0.0	NaN	→
60	V830 Test #12	0.0	NaN	→
61	V830 Test #13	0.0	NaN	→
62	V830 Test #14	0.0	NaN	→
63	V830 Test #15	0.0	NaN	→
64	V830 Test #16	0.0	NaN	→
65	V830 Test #17	4,780.0	Infinite	→
66	V830 Test #18	3,818.4	Infinite	→
67	V830 Test #19	10,000.0	Infinite	→
68	V830 Test #20	8,369.9	Infinite	→
69	V830 Test #21	0.0	NaN	→
70	V830 Test #22	0.0	NaN	→
71	V830 Test #23	10,000.0	Infinite	→
72	V830 Test #24	8,383.8	Infinite	→
73	V830 Test #25	3,818.4	Infinite	→
74	V830 Test #26	0.0	NaN	→
75	V830 Test #27	0.0	NaN	→
76	V830 Test #28	1.0	Infinite	→
77	V830 Test #29	0.0	NaN	→
78	V830 Test #30	3,818.4	Infinite	→
79	V830 Test #31	53.6	Infinite	→

18:28. S.C. の light が付いていた ⇒ off (付いている時は 112μA)

MPPC に電圧が掛からない (電流 : 62μA)

Beam を off にする.



18:48 MPPC に 57V EP可 (actual : 56.12V, 16.56 μA)
LEDで data を取る ⇒ run 9999

19:15 EASIROC側データ、
Calib.0001.dat → trigPat was "Or32u".
Calib.0002.dat → trigPat was "And32u".
Calib.0003.dat → pedestal.
Calib.0004.dat → hold タイミング調整.
to F.G. 2.4V で信号

20:00

20:13 実験室入室
EASIROC reboot

電気 (light あり 28.43 μA 状況は変わらず.
なし 27.34 μA

暗幕箱上流 Bの viewer を覆うライトがついてるかも?
→ ついてない.

ノイズレベルがより下がるか?
12ch ± 7mV

今の問題

- 4:44 につくった設定ファイルを使って電圧をかける.
  → 60 μA くらい電流が流れてしまう。
- オシロスコープで確認をしながら逆バイアスを設定
  → 今度は 1photon peak が見えた〜.

- EASIROC のチップを変えて MPPC ON → 25 μA くらい.
  本質的には変わらない.
- 五EASIROC モジュールで電源変えてみる.
- 使う 2ch だけ、使った設定ファイルの値にする (dac 256)
- current limit を上げて様子てみる.

20:47 放射線強度を NaI サーベイメーターで測定.
Q1 F.C. 付近. : over range
S.C. 表面 (上) : 4 ~ 5 μSv/h

- 使用する ch だけ電圧をかけてみる. 32 μA (@SC3 で)

○ 3

・pedestal 測定　　(ch 4, 12)

・結局、EASIROCの全体の current limit を
24 μA → 50 μA に変えた。

・S/Nがすごく悪い。(オシロでみた様子)

・バイアスを 4ch と 12ch のみにした。(他は降伏電圧以下)

状況をみる。

calib0005.root　　(F.G. 2.4V のとき)

calib0006.root　　(F.G. 約1.9V)

calib0007.root　　(F.G. off)

6, 14ch ○ 1 電圧 に設定

calib0008.root　　(F.G. OFF)

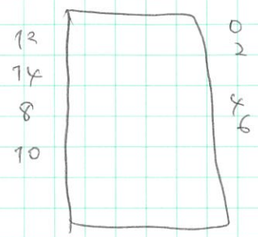
0, 8ch □ 3 ペデスタル　　calib0009.root

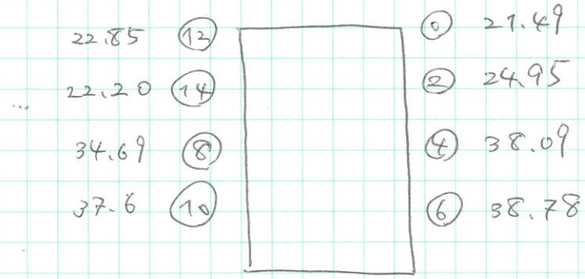
2, 10ch □ 1 〃　　calib0010.root

△スペクトルの幅をみる (rms)

4, 6, 8, 10

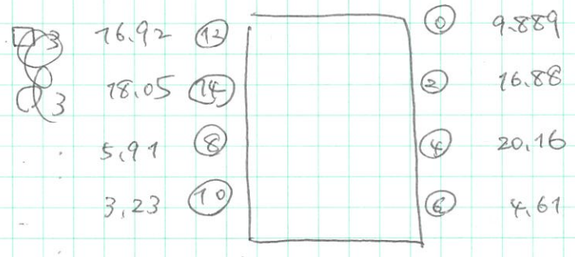
	上		下	
□3	21.49	⑩	34.69	⑧
○3	22.85	⑬	38.09	④
□1	24.95	②	37.6	⑩
○1	22.2	⑭	38.78	⑥





下の方が幅が広くなっている。

1216test0003.dat　　5.7V preset. FG OFFのデータ. ~~をとっていた~~ をとっていた。



22:33　calib0011 : LED 3V. (1/高)
やはり base line が低いのを拾っている…。

23:31　set/increase HV 57V をすると
fsで±50mV程度のノイズが乗ってしまう。(□1用DAC, ch2)
真空・大気圧どちらでも状況変わらず。
散乱層のフタを取り外すことに。

2017.12.17
01:00

放棄前データを GM管で線量確認

ファイバー付近 ～ 10～15 μSv/h

金 viewer 付近～ 30～40 μSv/h

散乱槽の内側りは 10－15 μSv/h 程度
予約して

(高いところで 20μSv/h 程度)

2:18 ~~交換~~ ネットワークポシロが見えない…、
とりあえず、LED1.9V, DAC300でデータをとってみる。

Calib0012.dat.

↳ きれいな pedestal が見える.
思ったのとは違うがこれはこれで。
LEDが弱いか、HVが低いか?

降伏電圧になってないのも.

2:40 LED2.0V. DAC400. preset 57V.

Calib0013.dat.

LED2.1V. DAC400

Calib0014.dat.

LED ~~2.4~~ V DAC400 ←これくらいに
2.3

Calib0015.dat

photon gain の表.

ch	gain [ch]	
0	24.5345	
0	20.687	
2	24.1583	DAC410
3	16.2837	→
4	22.6415	
(5)	~~27~~.12	DAC410
6	19.65	→
8	24.6518	DAC410
9	18.8019	→
(10)	18.36	DAC410
11	22.6264	→
12	23.9623	
13	21.9872	
14	21.7239	
~~16~~ (16)	24.88	
~~17~~ (17)	~~20.29~~ 24.56	
~~17~~ 18	26.3371	
~~18~~ 19	17.1097	DAC410 →
(20)	26.249	
(21)	~~20.369~~ 20.39	
22	22.3027	
23	26.24	

ふくろこう. リングトリムコイルが落ちたため、
復旧は夜の見込み。
(サイクリングからやり直し、ビーム調整再び?)

20

4/20
順

ファイバーラダーを散乱槽から取り外し

ビーム調整用の viewer, 全AlAuは

標準の5段ラダーに付け変えて、こちらでビーム調整を行うことにする

○ 標準ラダーのアライン

ファイバーラダーを散乱槽から取り外す前に、
レベルをファイバーラダーの viewer の中心に合うように置いた

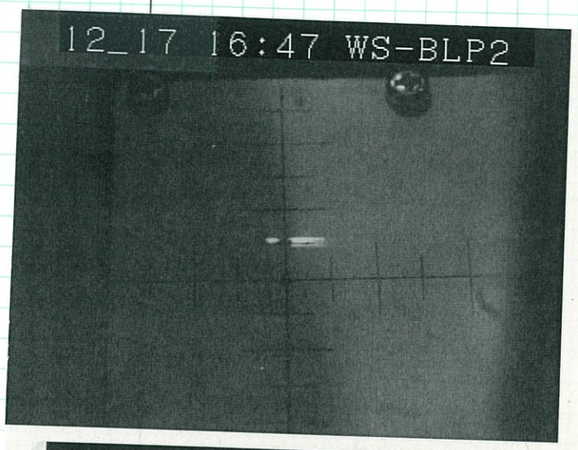
その状態で 標準ラダーの位置を調整

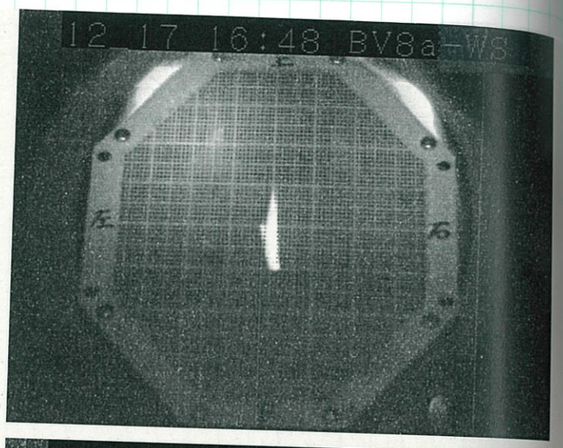
- 南北方向: レベルの視野の中心に合うように viewer を取り付けた
(水平)

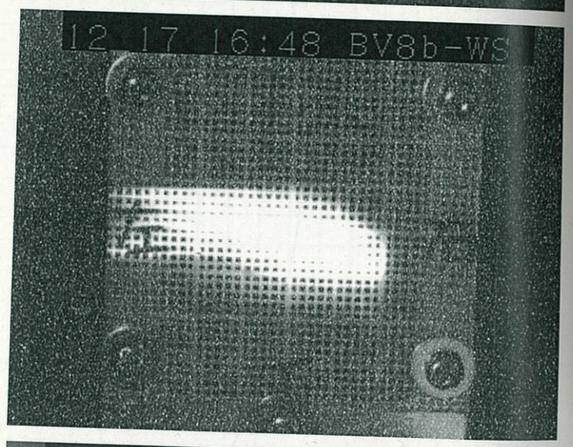
- 上下方向: viewer の中心とレベルの中心が合う
ポテンショ値: 3.246 V (前のファイバーのときとほぼ同じ)
↑
パラメータの定義もこれにかきかえた.

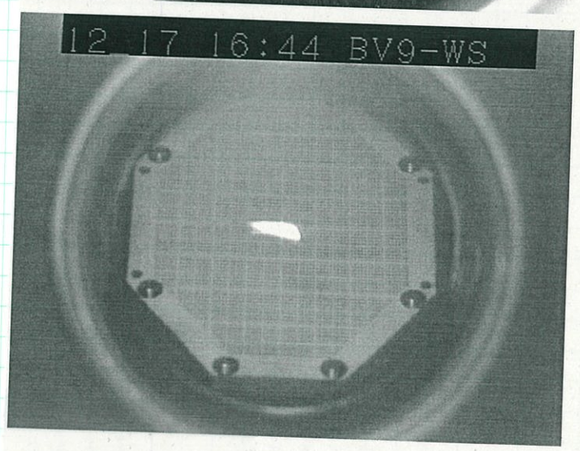
Al, Au 標的の高さについては、ファイバーのときと同じで良いことを確認した.

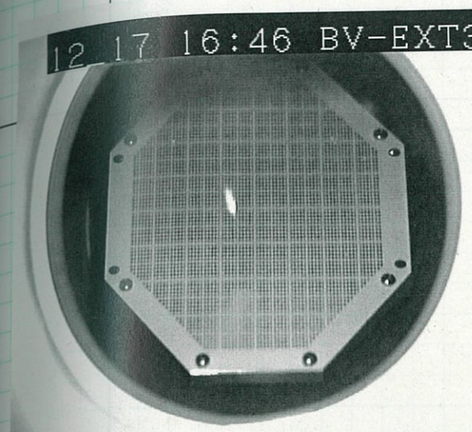
~19:00 標的までトランスポート完了

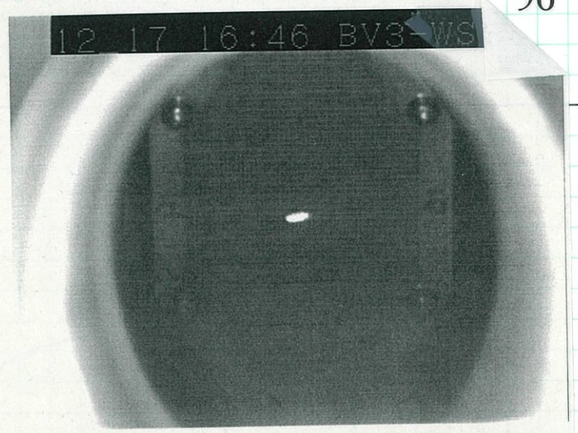


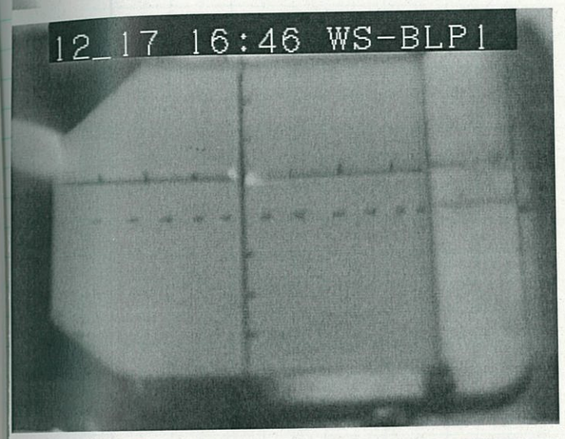


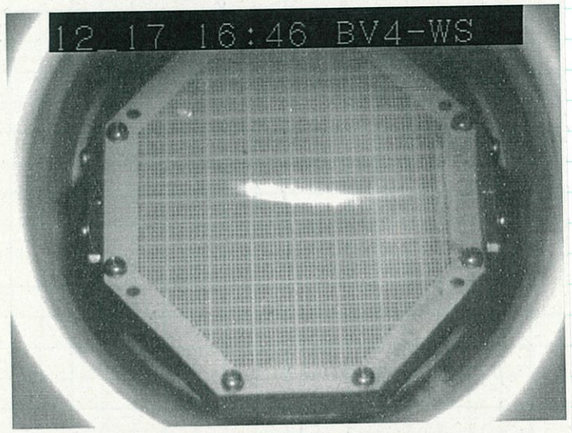


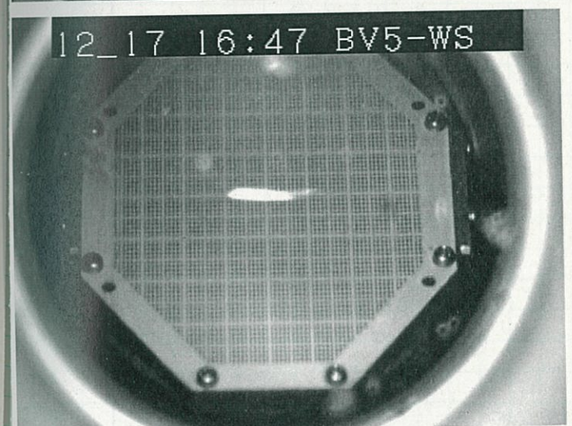


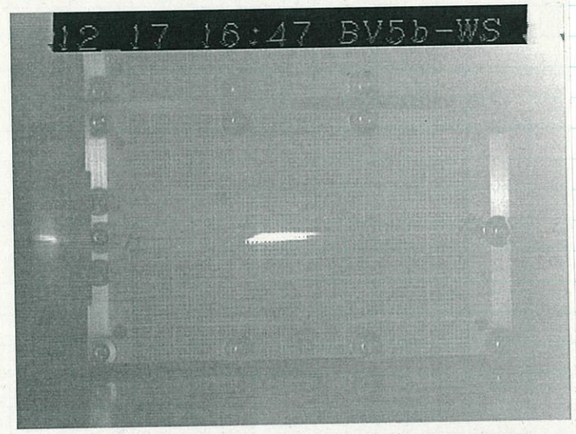


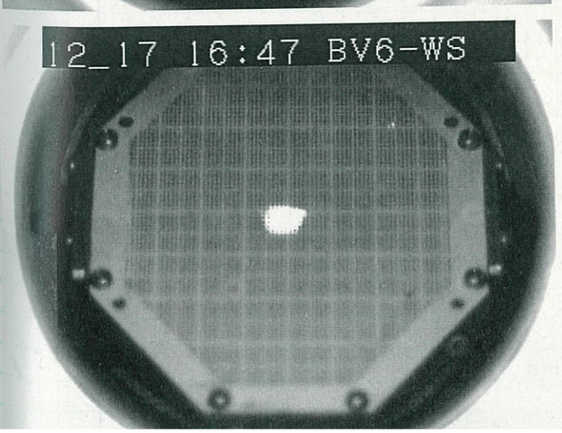


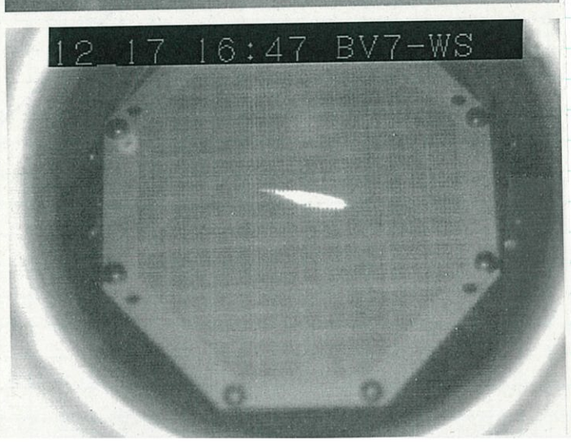












(P.P) 0degの磁場に設定.
(電流は流れていたので フィードバックを かけた)

File Option Hcopy Queue 17/12/17 16:58

Reaction

197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
Angle (lab.) Energy	0	deg.

Figure Text GR LAS

Magnetic Field

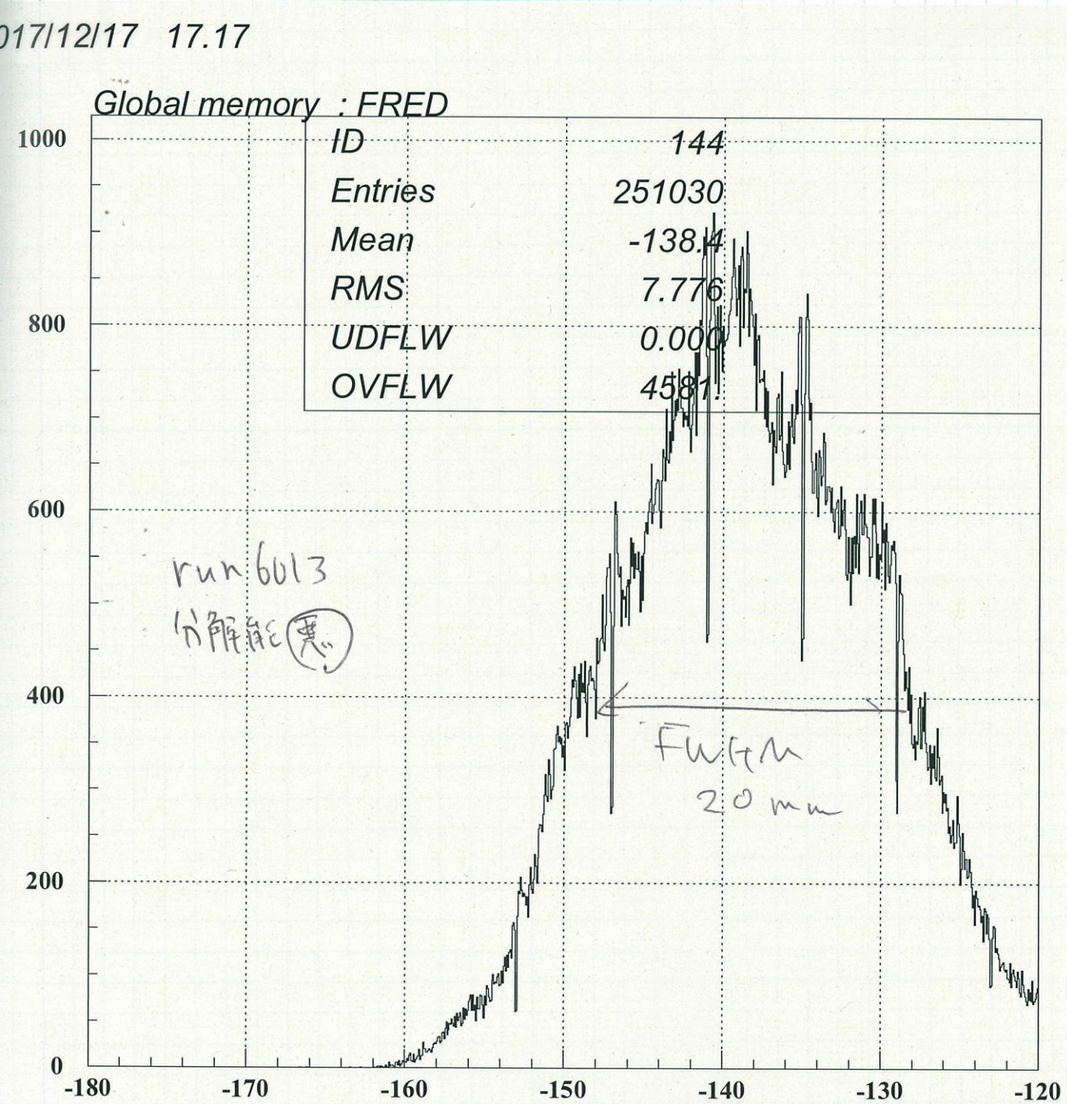
Particle			1 H	
Momentum			800.378	MeV/c
Rho			300	cm
Raito			100	%
Rho (DSR)		0	+	-
Q1	0	%	97.100	A
SX			18.786	A
Q2			8.774	A
D1	889.925	mT	236.720	A
D2	889.925	mT	444.073	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

- faint beam で 2.5 kHz @ FP.
(に調整してもらう.
- 標的はブランク (2.56 V) GR 0deg.

12:05 VDC bias ON cathode -5.7kV
potential -0.3kV

run 6013 に記録.

beam rate (GR trigger) 1.5 - 1.7 kHz



17:20～ 調整に high-int にする必要あり，

→[GR=4.5 deg, Target = Au, Q1FC 4.5deg] に
変更．

17:39 C-u 調整 start.

Q1-FC 0.670 V

19:4(GRX Narrow.

FWHM. 434 keV.

17:57. 300 keV, 260 160 73
250 keV. ⋮ ⋮ ⋮
230 keV 190 145 87 69
215 keV 165 130 93 98
190 180 120 107 71
185 ⋮ 105 ⋮ 72
⋮ 160 (current(65)) 86

19:24 run 6014 67keVのときのパラメータ
→ 72 keV → 再微調整
(再現せず)

19:27 run 6015 (微調後)
74 keV

→ 決．

19:34 run 6015 STOP．

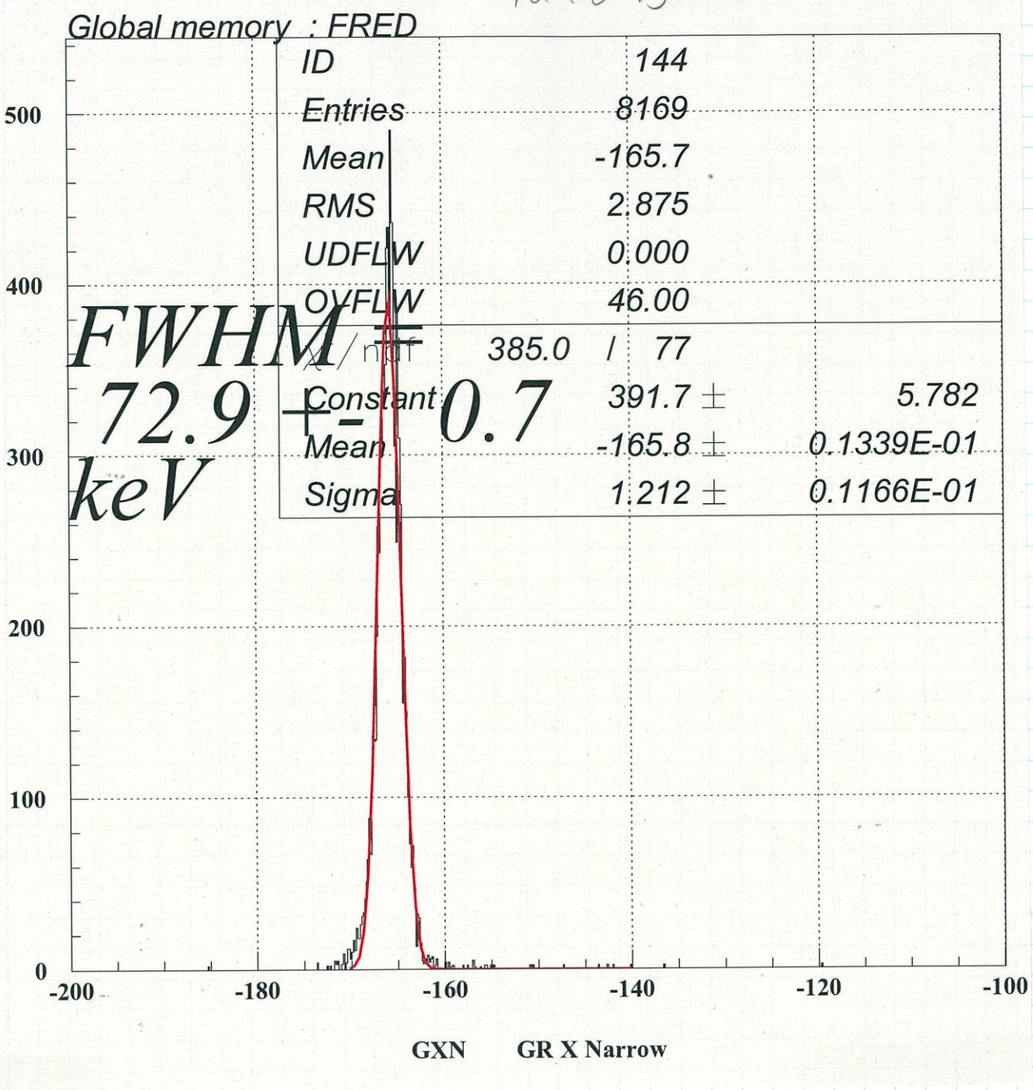
VDC → OFF.
軸出しなど．

20:03 軸出しOK.

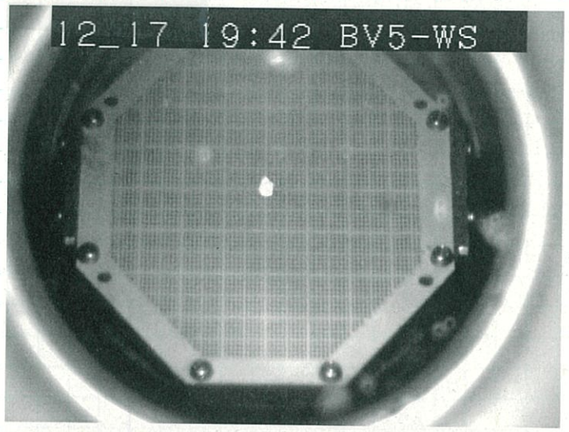
VDC → ON

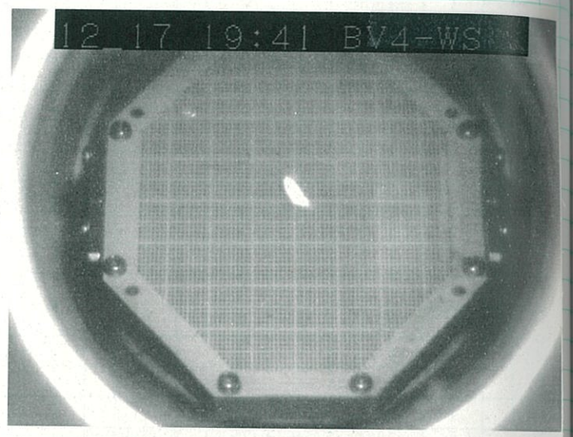
2017/12/17 19.34

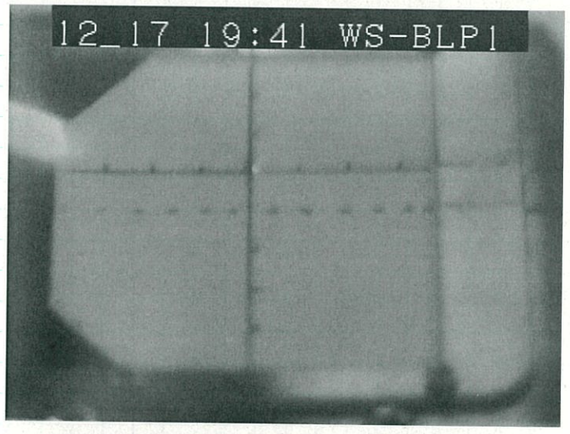
run 6015

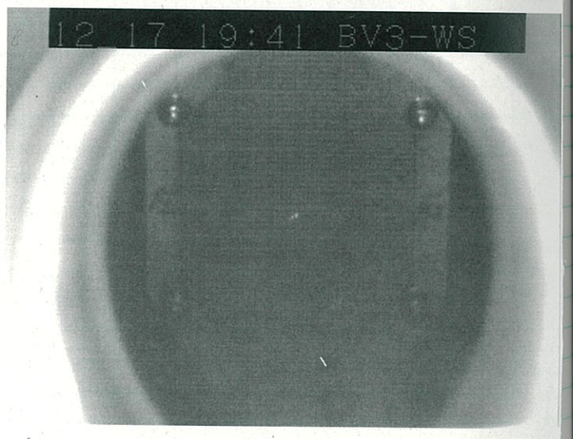


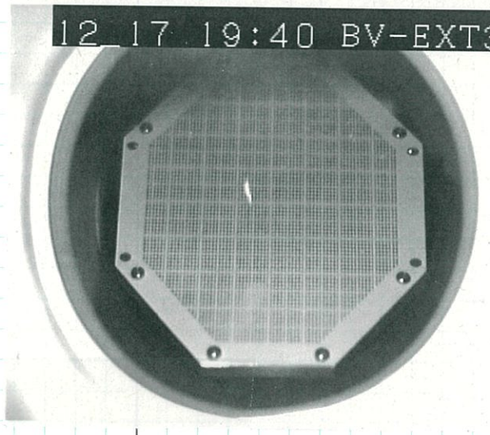
~20:10 ビームの軸出し完了

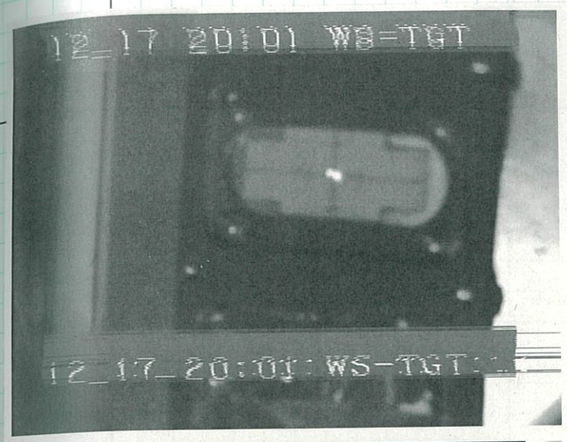


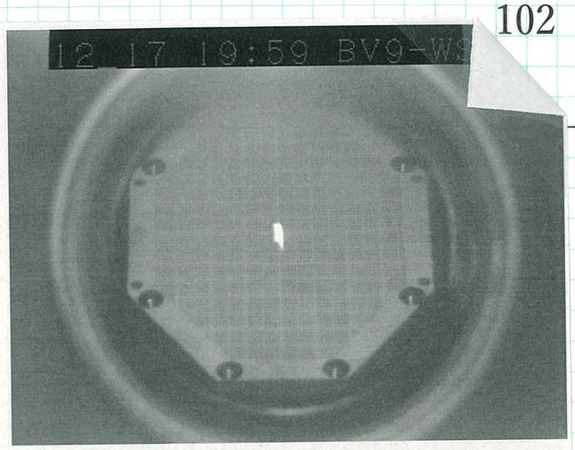


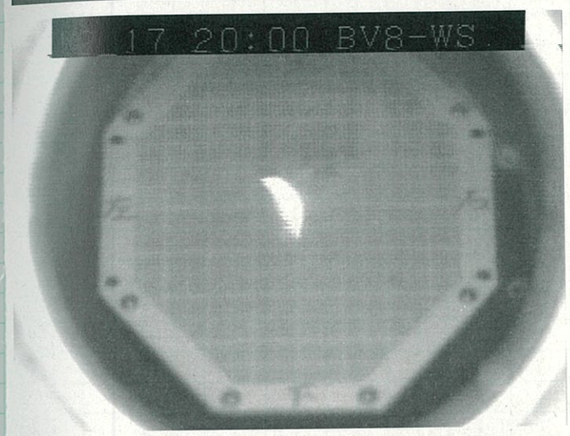


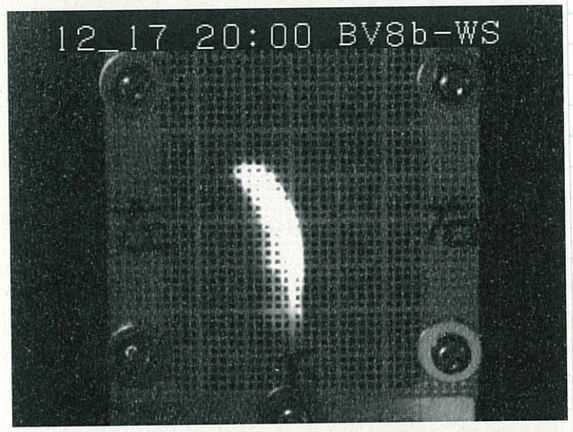


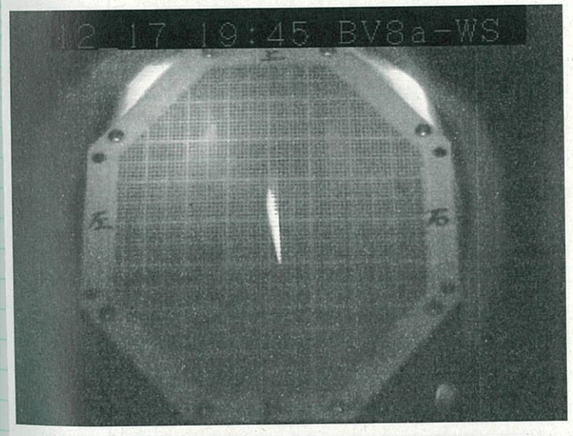


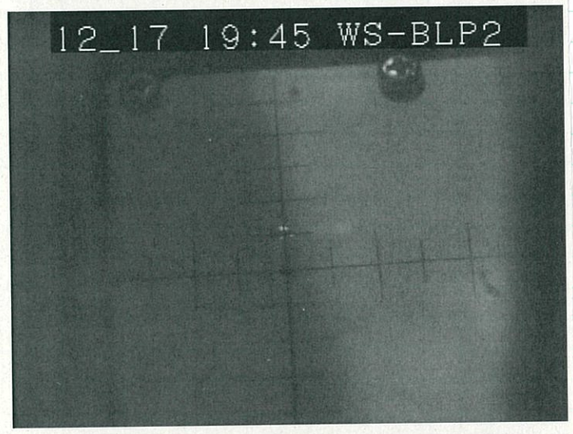


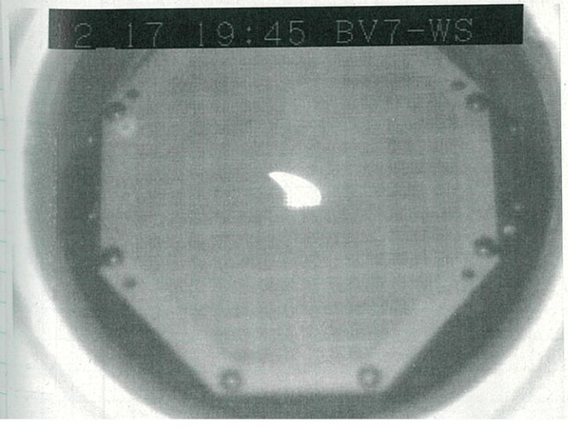


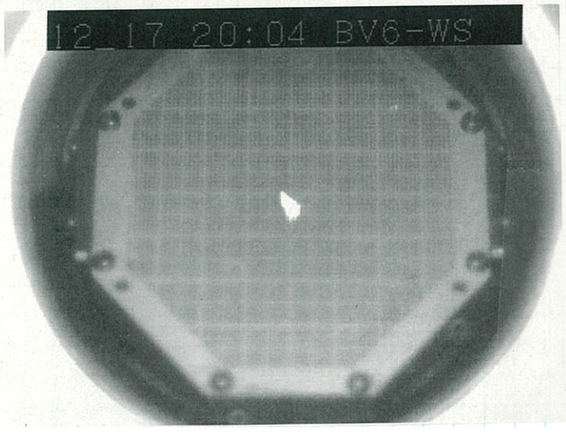






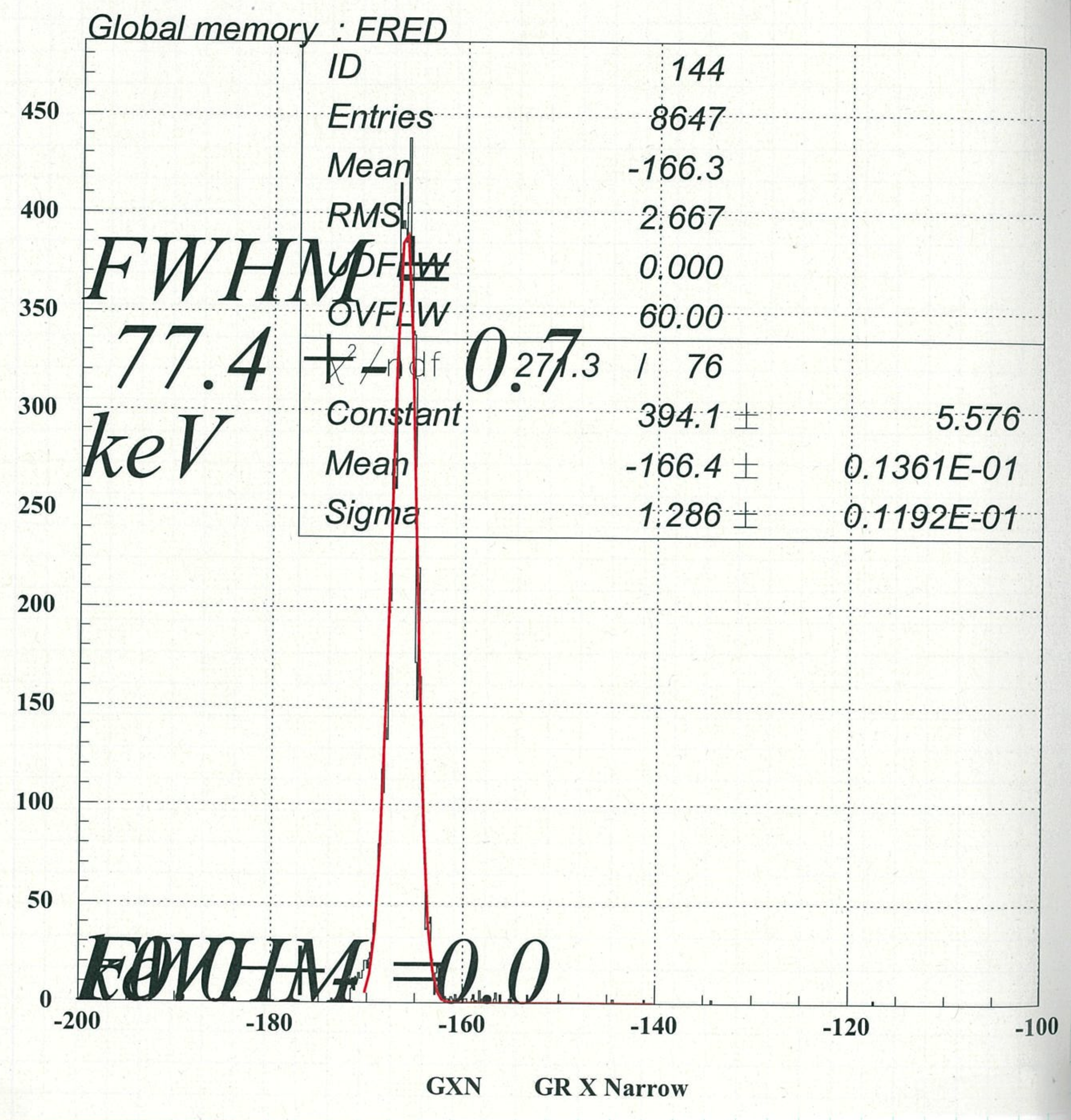




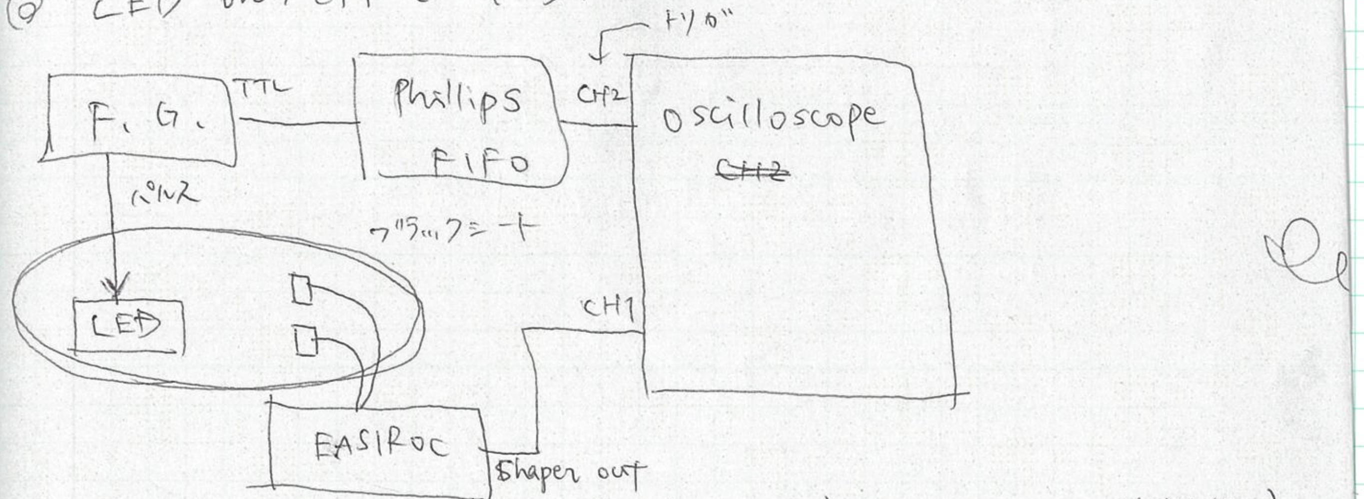


20:11 run6016 軸出し後、分解能確認、
~77keV.

2017/12/17 20.15



◎ LED on/off で 信号に変化があるか かくにん



(本命)		current(58V)		(50μm … 4)		current(58V)
75-9	0	8.48	アルコールで ふく →	50-1	0	6.22
75-10	0			-2	0	
				50-3	0	6.44
				-4	0	
				50-5	0	6.22
				6	0	
				50-7	0	6.44
				8	0	
				50 9	0	~~[illegible]~~ 6.37
				10	0	

20:10
全てみえている ので
N0で MPPCを mountする.

21:00 dispersiveモードでビーム調整中に
加速器の状態が変化してしまった。
→ 再度 achromatic モードに戻して
軸出しを行う。

21:27 → 完了

→ VDC ON & Target → Au. にしてチェック。

21:31 x ~166 mm
FWHM ~70 keV } OK!

21:34 ~~V~~DC OFF
dispersive mode で再調整

22:07 調整だん。focus 確認 → 前回と同じパラメタ
VDC ON → 4.5° で幅見てみる → ~~30 keV~~ 35 keV くらい。

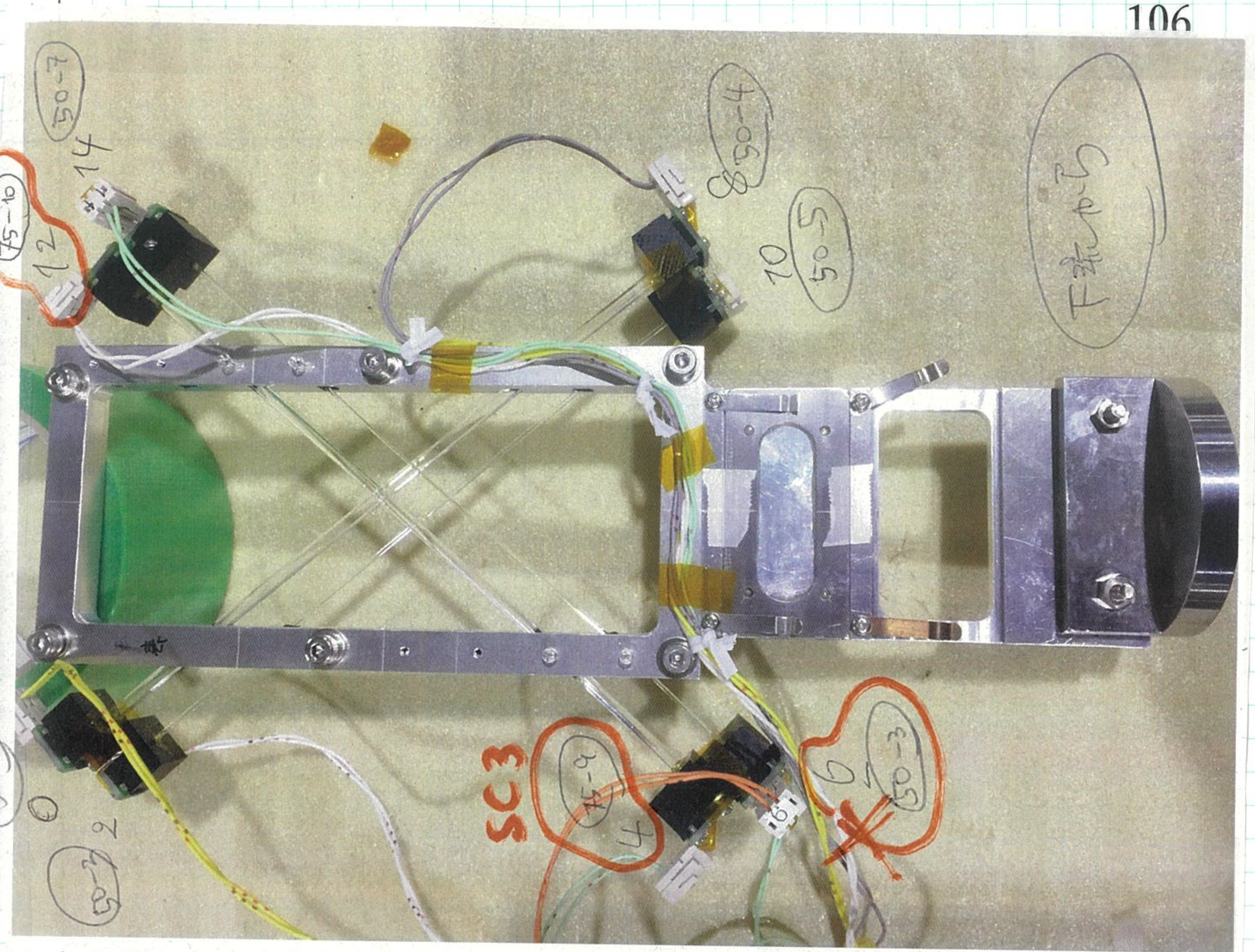
run 6018
Au, dispersive, 4.5°

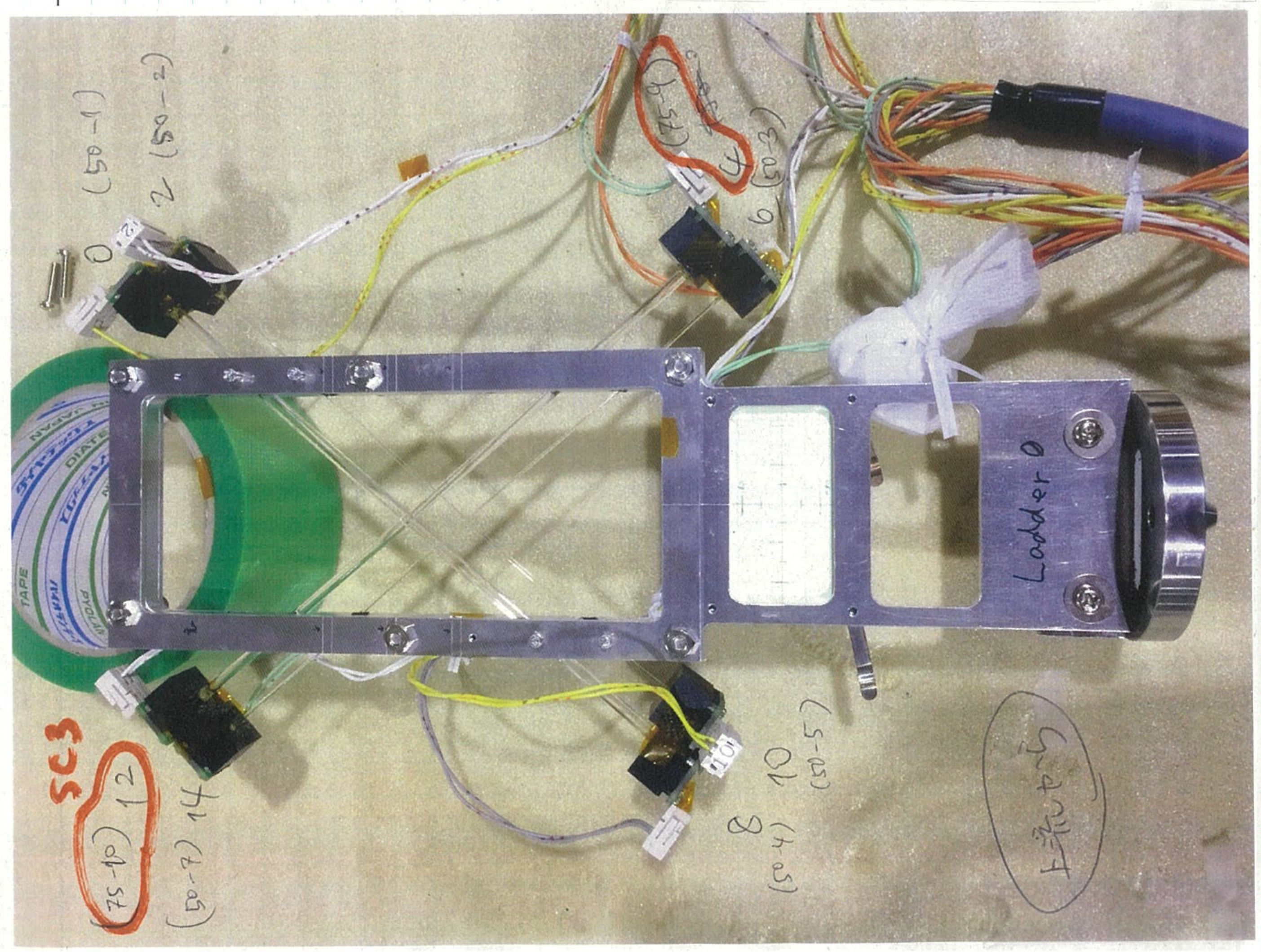
run 60~~18~~19
Al. 〃

→ 41 keV ← 角度, kinema 補正。

22:13 run 60~~1~~20
Al. slit 有. → 41 keV.

22:22 MPPCを予備につけかえた。(#3 の 75 μm のやつ) 付けたchは(50-1) gainが低くなる。





22:30

GR0 deg.

Resolution check. (faint beam)

GR trigger rate ~1.6 kHz.

Run 6021.

QM10UD	QM10M
24.8	-40.72

P.82 で決めた昨日の最適値. (FWHM 11 keV)

29 keV.

比率は P.75 参照.

QM10の条件を変える run 6022.

QM10UD(A)	QM10M (A)	FWHM (keV)
24.6	-40.57	~~FWHM~~ 33 keV
25.0	-40.89	25 keV
25.2	-41.05	23.5 keV
25.4	-41.21	22 keV
25.6	-41.38	23.7 ← ??
25.8	-41.54	18.5 keV
26.0	-41.70	19.7 keV
26.2	-41.87	17.5
26.4	-42.03	18.0
26.6	-42.20	18.8
26.8	-42.36	22.5
27.0	-42.52	22.8

23:00

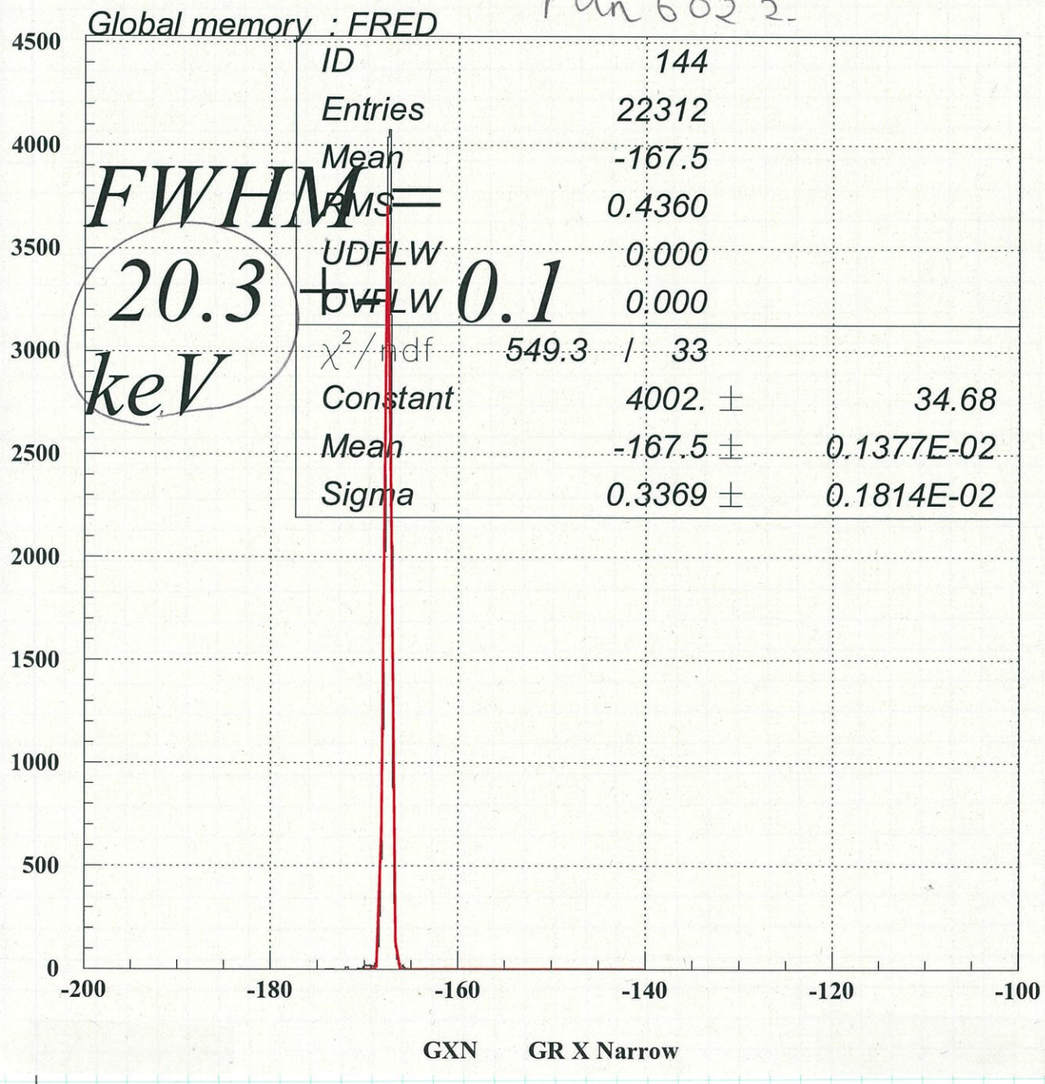
run 6022

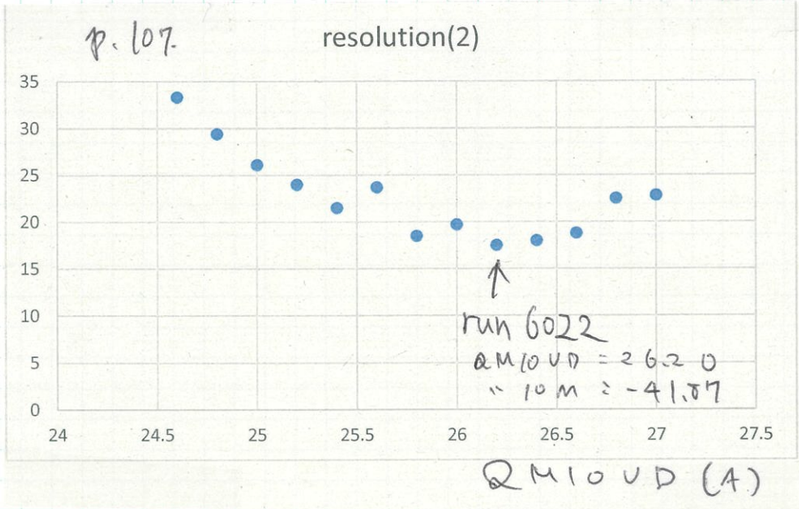
QM10UD : 26.20A

QM10M : -41.87A

2017/12/17 22.59

run 6022.





23:15 実験室入室.

23:58 us - switch 消灯

0:15 実験室退室.

23:45 磁石

ノイズレベル

		shaper out	fast out
	CH0	±4 mV	±11 mV
	CH2	±8 mV	±15 mV
	CH3	±15 mV	±20 mV
☆	CH4	±7 mV	±15 mV
☆	CH6	±2 mV	±5 mV
	CH8	±2 mV	±12 mV
	CH10	±2 mV	±8 mV
☆	CH12	±7 mV	±12 mV
	CH14	±7 mV	±12 mV

HV 58V, CH4, CH12 300 → 400

7.24 μA a = slow shaper a ノイズレベルをみる.

CH0	±8 mV
CH2	±8 mV
CH3	±10mV
CH4	±10mV
CH6	±5mV
CH8	±5 mV
CH10	±4mV
CH12	±11mV
CH14	±7mV

12/18
9:28

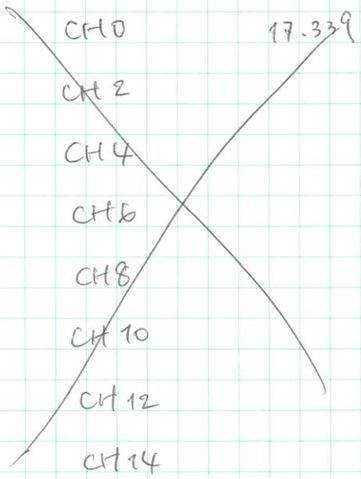
仕遣 Blank だった。

F.G.
2.3 V で とりあえず 補正データとる.

~~calb~~ calib 2001 . CH0

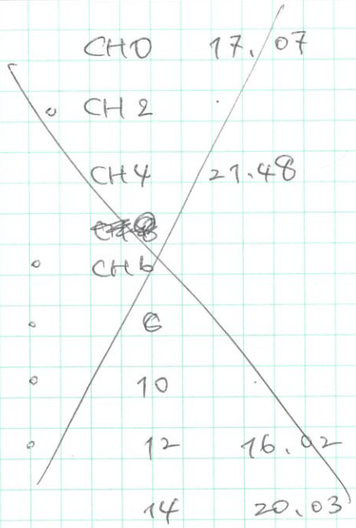
F.G.
2.5 V で とる calib 2002

DAC 4.12 → 350 , 14 → 450 に変更 calib 2003



CH0, CH4, CH12 が 光量多い のど.

F.G. 2.3V にしてとる. calib2004



2, 6, 8, 10, 12 ch の DAC + 25 ずつ. calib 2005.
↑ 設定が反映されてなかった.

calib 2006 .

F.G. 2.4V にして データとる. calib2007.

	calib 2006		calib 2007	
CH0	~~16~~ 16.86	759.~~8~~1	16.62	758.8
CH 2	19.71	765.0	19.77	~~765.5~~ 764.5
CH4	21.26	759.2	22.03	758.4
CH 6	16.79	760.2	16.83	759.8
CH 8	17.18	765.4	17.11	765.2
CH 10	17.60	769.4	17.86	769.0
CH 12	21.54	761.3	? 23.17	760.7
CH 14	19.94	760.0	20.36	759.6

=かごいこ。

Magnetic field before exposure.

File Option Hcopy Queue '17/12/18 00:57

Reaction

197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
◆ Angle (lab.) ◇ Energy	0	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			800.378	MeV/c
Rho			300	cm
Raito			100	%
Rho (DSR)	◆ 0	◇ +	◇ -	
Q1	0	%	97.100	A
SX			18.786	A
Q2			8.774	A
D1	889.925	mT	236.720	A
D2	889.925	mT	444.073	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

WS Magnets: Mon Dec 18 00:57:58 JST 2017

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1		97.100	A				
GR SX		18.700	A				
GR Q2		8.767	A				
GR D1		236.073	A	889.925	889.932	mT	FB
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2		444.195	A	889.925	889.930	mT	FB
GR DSR		0.054	A		Error	mT	
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

150| Run 6023

GR-LAS coincidence was 0.

↳ EASIROC (LAS) trigger is fast.

200ns おくらせる. (FPGAのjitter分も考慮して)

trigger study

```
Fri Dec 15 16:21:04 from oasis.rcnp.osaka
tems Inc.   SunOS 5.8       Generic February 2000
l.
setup
current setting from FPGAs ... Done

-----------------------------------------
 Setup (Main Menu)
UL-2000

ization menu
ontrol

the menu:

current setting from FPGAs ... Done

-----------------------------------------
 Setup (CAMAC Control)

le sampling rate  [1].
gle sampling rate [1].
el sampling rate  [0].
ence gate width   [16] ~= 25x(16+2) nsec.
 pattern  1  2  3  4  5  (plane)
          1  1  1  1  1  (1:on 2:off)

the menu:
```

window 450 nsec

実験室入室

E492 run sheet signature: Sakaue

Run#: 6023 Title: coincidence check, GR 0deg, VDC 5.7kV, P0.3kV dispersive mode

Start time: 2017/12/18 00:58:15 Stop time: 01:01:41 Target: □ 3mm

GR angle: 0 Temp Ladder: 23 [°C] room: 23.24 [°C]

ER trigger: self / LED DAC: 57 (700) Shaping Time: (HG) ~~25~~ [ns] (LG) 25 [ns]

D1: 889.911 [mT] D2: 889.912 [mT] Live: GR: 20 [%] LAS: 86 [%]

GR single(7): 1800 [Hz] LAS single(10): 1300 [Hz] COIN(11): 0 [Hz]

Comment: ~~for~~ GRのタイミングがわずかコインデンス取れず

E492 run sheet signature: SK.

Run#: 6024 Title:

Start time: 2017/12/18 1:36:30 Stop time: Target: □ 3mm

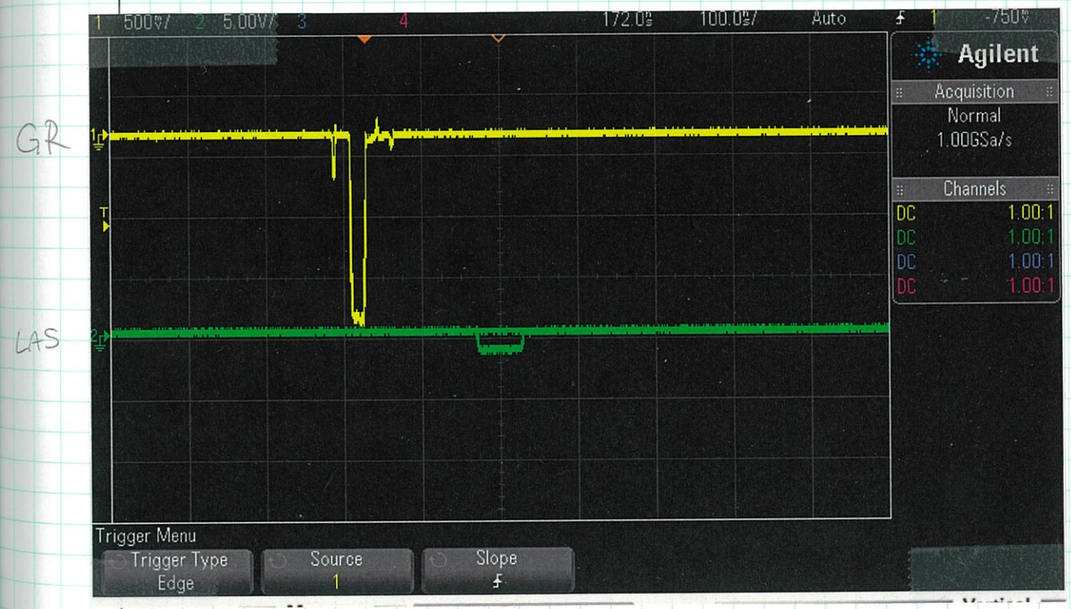
GR angle: 0 Temp Ladder: [°C] room: [°C]

ER trigger: self / LED DAC: 57 (700) Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: [mT] D2: [mT] Live: GR: [%] LAS: [%]

GR single(7): 2.4k [Hz] LAS single(10): 1.7k [Hz] COIN(11): 1.6k [Hz]

Comment: After adjusting coincidence timing



↑ 約200ns LASを遅らせた

⇒ run 6024

~~LAS~~ Coin / LAS ~ 0.9 … OK.

WS DAQ

Scalers

Run: 6024 (STOPPED)
Comment: coincidence check, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode(best resolution)
From: 2017/12/18 01:36:30
To: 2017/12/18 01:38:23
Duration: 112.8 sec
BI Range: 6.00 nA
Beam Charge: .02 nC

Ch#	Name	Scaler SPIN UP	Scaler DOWN
		BLP1 OUT	OUT
		BLP2 OUT	OUT
0	Beam Intensity	0	4
1	GR Trigger	137,082	136,664
2	GR Trigger Live	113,228	113,080
3	GR Clock	563,737	563,906
4	GR Clock Live	512,314	512,068
5	Broken Channel	0	0
6	LAS Trigger Live	97,799	97,962
7	LAS Clock	563,737	563,906
8	LAS Clock Live	512,556	512,311
9	GR Singles Event	22,429	22,085
10	LAS Singles Event	7,000	6,963
11	GR-LAS Coincidence	90,799	90,995
12	LAS Singles Sampling	7,000	6,963
13	LAS Trigger	113,796	114,018
14	GR Singles Sampling	22,429	22,085
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0
20	BLP1 Left Chance	0	0
21	BLP1 Right Chance	0	0
22	BLP1 Up Chance	0	0
23	BLP1 Down Chance	0	0
24	BLP2 Left	0	0
25	BLP2 Right	0	0
26	BLP2 Up	0	0
27	BLP2 Down	0	0
28	BLP2 Left Chance	0	0
29	BLP2 Right Chance	0	0
30	BLP2 Up Chance	0	0
31	BLP2 Down Chance	0	0
32	BLP Clock	0	0
33	BLP Clock Live	0	0
34	BLP Trigger	0	0
35	BLP Trigger Live	0	0
36	Akimune Up	0	0
37	Akimune Down	0	0
38	Akimune Left	0	0
39	Akimune Right	0	0
40	BLM#1 QM5D	14	21
41	BLM#2 QM6U	0	0
42	BLM#3 SX1	0	6
43	GR Scintillator 1	0	0
44	BI Range #0	0	0
45	BI Range #1	563,747	563,911
46	BI Range #2	563,747	563,911
47	BI Range #3	563,747	563,911
48	AVF BLP BI	0	0
49	AVF BLP Left	0	0
50	AVF BLP Right	0	0
51	AVF BLP Up	0	0
52	AVF BLP Down	0	0
53	V830 Test #5	0	0
54	V830 Test #6	0	0
55	V830 Test #7	0	0
56	V830 Test #8	0	0
57	V830 Test #9	0	0
58	V830 Test #10	0	0
59	V830 Test #11	0	0
60	V830 Test #12	0	0
61	V830 Test #13	0	0
62	V830 Test #14	0	0
63	V830 Test #15	0	0
64	V830 Test #16	0	4
65	V830 Test #17	137,082	136,664
66	V830 Test #18	113,228	113,080
67	V830 Test #19	563,737	563,906
68	V830 Test #20	512,314	512,068
69	V830 Test #21	113,796	114,018
70	V830 Test #22	97,799	97,962
71	V830 Test #23	563,737	563,906
72	V830 Test #24	512,556	512,311
73	V830 Test #25	22,429	22,085
74	V830 Test #26	7,000	6,963
75	V830 Test #27	90,799	90,995
76	V830 Test #28	56	56
77	V830 Test #29	0	0
78	V830 Test #30	22,429	22,085
79	V830 Test #31	0	5

WS DAQ C

Ratemeters

Run: 6024 (RUNNING)
Comment: coincidence check, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode(best resolution)
From: 2017/12/18 01:38:07
To: 2017/12/18 01:38:08
Duration: 1.0 sec
Spin: UP
BLP1: OUT
BLP2: OUT
BI Range: 6.00 nA
Beam Current: 0.00 nA
GR Live: 83.1 %
LAS Live: 83.9 %
Clock Live: 91.0 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,401.2	Infinite	→
2	GR Trigger Live	1,994.8	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,100.9	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,705.7	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,105.9	Infinite	→
9	GR Singles Event	399.4	Infinite	→
10	LAS Singles Event	110.3	Infinite	→
11	GR-LAS Coincidence	1,595.5	Infinite	→
12	LAS Singles Sampling	110.3	Infinite	→
13	LAS Trigger	2,032.6	Infinite	→
14	GR Singles Sampling	399.4	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→
20	BLP1 Left Chance	0.0	NaN	→
21	BLP1 Right Chance	0.0	NaN	→

File Option Hcopy Queue '17/12/18 02:13

Reaction

197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
◆ Angle (lab.) ◇ Energy	0	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			800.378	MeV/c
Rho			300	cm
Raito			99	%
Rho (DSR)		◆ 0 ◇ + ◇ -		
Q1	0	%	96.129	A
SX			18.598	A
Q2			8.686	A
D1	881.026	mT	234.353	A
D2	881.026	mT	439.632	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

E492 run sheet signature: Nanamura

Run#: 6025 Title: beam through, GR 0 deg, VDC C5.7 kV, P0.3kV. dispersive mode

Start time: 1:45 Stop time: ~~1:50~~ 1:55:29 Target: blank

GR angle: 0 Temp Ladder: ____ [°C] room: ____ [°C]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) ____ [ns] (LG) ____ [ns]

D1: 889.932 [mT] D2: 889.925 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: ~~Vme~~ sConnection to Vmeserver was disable. recovered and run stop successfully.

→ Resolution 20 keV (FWHM).

Change Magnetic Field of Grand Raiden.

100% → 98%.

GR trigger rate decrease to 100Hz.

Change Magnetic Field of Grand Raiden.

98% → 99% GRX = -400

WS Magnets: Mon Dec 18 02:13:51 JST 2017

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	96.129	96.200	A				
GR SX	18.598	18.500	A				
GR Q2	8.686	8.679	A				
GR D1		233.846	A	881.026	881.024	mT	FB
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2		440.171	A	881.026	880.997	mT	FB
GR DSR		0.054	A		Error	mT	
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments
Run 6025: Stopped

E492 run sheet signature: Nanamura

Run#: 6026 Title: beam through. GR0deg (VDC~). MF ~~99~~ 98.5%.

Start time: 2:13:56 Stop time: 2:15:47 Target: Blank

GR angle: 0° Temp Ladder: _____ [°C] room: _____ [°C]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 881.024 [mT] D2: 880.997 [mT] Live: GR: _____ [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: _____

12/18/2017 W 12/18/2017 WS

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DAQ
DAQ Controller
Parameter Setting
Run Controller
Run Notes
Scalers
Ratemeters
Beam Polarization
Beam Polarization (AVF)
Trend Monitor...
Devices
Analyzer
Terminals
Contact

Ratemeters

Run: 6026 (RUNNING)
Comment: beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode MF 99%
From: 2017/12/18 02:14:09
To: 2017/12/18 02:14:10
Duration: 1.0 sec
Spin: UP
BLP1: OUT
BLP2: OUT
BI Range: 6.00 nA
Beam Current: 0.00 nA
GR Live: 84.5 %
LAS Live: 91.3 %
Clock Live: 91.8 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,150.0	Infinite	→
2	GR Trigger Live	1,816.3	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,182.7	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	94.3	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,190.7	Infinite	→
9	GR Singles Event	1,816.3	Infinite	→
10	LAS Singles Event	94.3	Infinite	→
11	GR-LAS Coincidence	0.0	NaN	→
12	LAS Singles Sampling	94.3	Infinite	→
13	LAS Trigger	103.3	Infinite	→
14	GR Singles Sampling	1,816.3	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→
20	BLP1 Left Chance	0.0	NaN	→
21	BLP1 Right Chance	0.0	NaN	→

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Contact

Scalers

Run: 6026 (STOPPED)
Comment: beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode MF 99%
From: 2017/12/18 02:13:56
To: 2017/12/18 02:15:47
Duration: 110.8 sec
BI Range: 6.00 nA
Beam Charge: .00 nC

Ch#	Name	Scaler SPIN	Scaler BLP1	Scaler BLP2
		UP	OUT	OUT
		DOWN	OUT	OUT
0	Beam Intensity	0	0	
1	GR Trigger	119,356	119,426	
2	GR Trigger Live	100,801	100,821	
3	GR Clock	553,757	553,777	
4	GR Clock Live	507,990	508,176	
5	Broken Channel	0	0	
6	LAS Trigger Live	5,187	5,215	
7	LAS Clock	553,757	553,777	
8	LAS Clock Live	508,389	508,572	
9	GR Singles Event	100,796	100,819	
10	LAS Singles Event	5,182	5,213	
11	GR-LAS Coincidence	5	2	
12	LAS Singles Sampling	5,182	5,213	
13	LAS Trigger	5,642	5,722	
14	GR Singles Sampling	100,796	100,819	
15	GR Trigger (500nsec)	0	0	

GR
磁場 99% → 98.5% に変更

File Option Hcopy Queue '17/12/18 02:19

Reaction

197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
◆ Angle (lab.) ◇ Energy	0	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			800.378	MeV/c
Rho			300	cm
Raito			98.5	%
Rho (DSR)	◆ 0	◇ +	◇ -	
Q1	0	%	95.643	A
SX			18.505	A
Q2			8.642	A
D1	876.576	mT	233.169	A
D2	876.576	mT	437.412	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	95.643	95.700	A				
GR SX	18.505	18.400	A				
GR Q2	8.642	8.634	A				
GR D1		232.593	A	876.576	876.560	mT	FB
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2		437.404	A	876.576	876.586	mT	FB
GR DSR		0.054	A		Error	mT	
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments

Run 6027: beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode MF 98

E492 run sheet

signature: Nanamura

Run#: 6027. Title: beam through, GR0deg. (VDC~, dispersive) MF98.5%

Start time: 2:19:59 Stop time: 2:21:59 Target: Blank.

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57. [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 876.553 [mT] D2: 876.572 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

Ratemeters

Run:	6027 (RUNNING)
Comment:	beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode MF 98.5%
From:	2017/12/18 02:20:10
To:	2017/12/18 02:20:11
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	86.6 %
LAS Live:	91.7 %
Clock Live:	92.7 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	1,855.0	Infinite	→
2	GR Trigger Live	1,606.8	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,271.1	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	98.3	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,278.1	Infinite	→
9	GR Singles Event	1,606.8	Infinite	→
10	LAS Singles Event	98.3	Infinite	→
11	GR-LAS Coincidence	0.0	NaN	→
12	LAS Singles Sampling	98.3	Infinite	→
13	LAS Trigger	107.2	Infinite	→
14	GR Singles Sampling	1,606.8	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→

Scalers

Run:	6027 (STOPPED)
Comment:	beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode MF 98.5%
From:	2017/12/18 02:19:59
To:	2017/12/18 02:21:59
Duration:	119.8 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	116,779	115,076
2	GR Trigger Live	100,397	98,981
3	GR Clock	604,093	594,045
4	GR Clock Live	558,234	549,238
5	Broken Channel	0	0
6	LAS Trigger Live	5,799	5,596
7	LAS Clock	604,093	594,045
8	LAS Clock Live	558,628	549,624
9	GR Singles Event	100,394	98,979
10	LAS Singles Event	5,796	5,594
11	GR-LAS Coincidence	3	2
12	LAS Singles Sampling	5,796	5,594
13	LAS Trigger	6,250	6,073
14	GR Singles Sampling	100,394	98,979
15	GR Trigger (500nsec)	0	0

GR 磁場
103% にしてみて、レートを見る。 02:30 2.1kcps ok.

~~GR=470~~ GRX=470

WS Magnets: Mon Dec 18 02:32:30 JST 2017

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	100.013	100.100	A				
GR SX	19.350	19.300	A				
GR Q2	9.037	9.034	A				
GR D1		243.033	A	916.623	916.636	mT	FB
GR MQ		0.000	A				
GR MS		0.037	A				
GR D2	457.395	457.275	A	916.623	916.633	mT	FB
GR DSR		0.054	A		Error	mT	
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments

Run 6027: Stopped

File Option Hcopy Queue '17/12/18 02:32

Reaction

197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
Angle (lab.) / Energy	0	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			800.378	MeV/c
Rho			300	cm
Raito			103	%
Rho (DSR)			0 / + / -	
Q1	0	%	100.013	A
SX			19.350	A
Q2			9.037	A
D1	916.623	mT	243.822	A
D2	916.623	mT	457.395	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

E492 run sheet signature: Nanamura

Run#: 6028 Title: beam through odeg (VDC, ~, dispersive). MF 103%

Start time: 2:30:54 Stop time: 2:32:49 Target: blank

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: (self) / LED DAC: 700 Shaping Time: (HG) ____ [ns] (LG) ____ [ns]

D1: 916.629 [mT] D2: 916.638 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: ____

Ratemeters

Run:	6028 (RUNNING)
Comment:	beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode MF 103%
From:	2017/12/18 02:30:59
To:	2017/12/18 02:31:00
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	85.9 %
LAS Live:	91.8 %
Clock Live:	92.1 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,037.3	Infinite	→
2	GR Trigger Live	1,750.3	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,209.3	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	100.3	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,216.3	Infinite	→
9	GR Singles Event	1,750.3	Infinite	→
10	LAS Singles Event	100.3	Infinite	→
11	GR-LAS Coincidence	0.0	NaN	→
12	LAS Singles Sampling	100.3	Infinite	→
13	LAS Trigger	109.3	Infinite	→
14	GR Singles Sampling	1,750.3	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→

WS

Scalers

Run:	6028 (STOPPED)
Comment:	beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode MF 103%
From:	2017/12/18 02:30:54
To:	2017/12/18 02:32:49
Duration:	114.8 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler UP	Scaler DOWN
	SPIN	OUT	OUT
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	114,518	114,664
2	GR Trigger Live	98,686	98,554
3	GR Clock	573,858	573,774
4	GR Clock Live	529,386	528,530
5	Broken Channel	0	0
6	LAS Trigger Live	5,330	5,599
7	LAS Clock	573,858	573,774
8	LAS Clock Live	529,772	528,918
9	GR Singles Event	98,680	98,550
10	LAS Singles Event	5,324	5,595
11	GR-LAS Coincidence	6	4
12	LAS Singles Sampling	5,324	5,595
13	LAS Trigger	5,787	6,057
14	GR Singles Sampling	98,680	98,550
15	GR Trigger (500nsec)	0	0

faint beam が見るのは これが 終わり)

↑ dispersion を

02:40 ・標的を Au に変更 (insder 4.044)

・Sieve Slit に変更 ・磁場 100%.

→ ほぼ真ん中しか見えない.

E492 run sheet signature: Nanamura

Run#: 6029 Title: Au target, Sieve Slit in, odeg, (VDC, ~, dispersive)

Start time: 2:40:41 Stop time: 2:43:39 Target: Au

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: (self) / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.928 [mT] D2: 889.917 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: Sieve Slit in

Ratemeters

Run:	6029 (RUNNING)
Comment:	Au target, Sieve slit in, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 02:41:03
To:	2017/12/18 02:41:04
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	88.1 %
LAS Live:	94.7 %
Clock Live:	93.4 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	1,591.0	Infinite	→
2	GR Trigger Live	1,402.3	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,336.6	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	70.5	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,342.5	Infinite	→
9	GR Singles Event	1,402.3	Infinite	→
10	LAS Singles Event	70.5	Infinite	→
11	GR-LAS Coincidence	0.0	NaN	→
12	LAS Singles Sampling	70.5	Infinite	→
13	LAS Trigger	74.5	Infinite	→
14	GR Singles Sampling	1,402.3	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→

Scalers

Run:	6029 (STOPPED)
Comment:	Au target, Sieve slit in, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 02:40:41
To:	2017/12/18 02:43:39
Duration:	177.2 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler UP	Scaler DOWN
	SPIN		
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	133,884	133,482
2	GR Trigger Live	117,931	117,555
3	GR Clock	885,959	885,966
4	GR Clock Live	832,769	832,952
5	Broken Channel	0	0
6	LAS Trigger Live	5,384	5,243
7	LAS Clock	885,959	885,966
8	LAS Clock Live	833,221	833,424
9	GR Singles Event	117,924	117,553
10	LAS Singles Event	5,377	5,241
11	GR-LAS Coincidence	7	2
12	LAS Singles Sampling	5,377	5,241
13	LAS Trigger	5,712	5,542
14	GR Singles Sampling	117,924	117,553
15	GR Trigger (500nsec)	0	0

ファイバーの測定

3mm

Run 6030 ・ビームおし忘れていた. ~~Sieve~~

~~ビームイメージ~~

・Sieve Slit が入っていた. junk.

→ Run 6031

E492 run sheet signature: Nanamura

Run#: 6031 Title: Sq 3mm U GR 0deg. (VDC ~, dispersive).

Start time: 2:56:53 Stop time: 3:02:08 Target: 3mm Sq, U

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.923 [mT] D2: 889.910 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ~2200 [Hz] LAS single(10): ~350 [Hz] COIN(11): ~224 [Hz]

Comment: ____

Ratemeters

Run:	6031 (RUNNING)
Comment:	Sq 3mm U GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 02:57:41
To:	2017/12/18 02:57:42
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	82.6 %
LAS Live:	83.9 %
Clock Live:	91.0 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,437.9	Infinite	→
2	GR Trigger Live	2,013.9	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,097.3	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	293.9	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,104.3	Infinite	→
9	GR Singles Event	1,821.3	Infinite	→
10	LAS Singles Event	101.3	Infinite	→
11	GR-LAS Coincidence	192.7	Infinite	→
12	LAS Singles Sampling	101.3	Infinite	→
13	LAS Trigger	350.5	Infinite	→
14	GR Singles Sampling	1,821.3	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→

Scalers

Run:	6031 (STOPPED)
Comment:	Sq 3mm U GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 02:56:53
To:	2017/12/18 03:02:08
Duration:	315.1 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler UP	Scaler DOWN
	SPIN	OUT	OUT
	BLP1	OUT	OUT
	BLP2	0	0
0	Beam Intensity	348,953	350,780
1	GR Trigger	292,614	294,931
2	GR Trigger Live	1,570,368	1,580,664
3	GR Clock	1,431,175	1,447,741
4	GR Clock Live	0	0
5	Broken Channel	52,207	52,194
6	LAS Trigger Live	1,570,368	1,580,664
7	LAS Clock	1,432,240	1,448,814
8	LAS Clock Live	254,991	257,482
9	GR Singles Event	14,583	14,745
10	LAS Singles Event	37,623	37,449
11	GR-LAS Coincidence	14,583	14,745
12	LAS Singles Sampling	60,177	60,094
13	LAS Trigger	254,991	257,482
14	GR Singles Sampling	0	0
15	GR Trigger (500nsec)	0	0
16	BLP1 Left		

Faint Beam なのに ビーム幅が 狭くなっている？

3mm 幅に関しては，7点取ることにする。

wsdev 0.563 に設定

E492 run sheet signature: Nanamura

Run#: 6032 Title: Sq 3mm U-2 (GR0deg, VDC~, dispersive),

Start time: 3:06:22 Stop time: 3:08:54 Target: Sq 3mm

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.919 [mT] D2: 889.928 [mT] Live: GR: 84.7 [%] LAS: 87.4 [%]

GR single(7): ~2200 [Hz] LAS single(10): ~536 [Hz] COIN(11): ~450 [Hz]

Comment: ____

Ratemeters

Run:	6032 (RUNNING)
Comment:	Sq 3mm U-2 GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 03:06:39
To:	2017/12/18 03:06:40
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	83.1 %
LAS Live:	86.4 %
Clock Live:	91.3 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,328.7	Infinite	→
2	GR Trigger Live	1,935.8	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,133.3	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	555.5	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,139.3	Infinite	→
9	GR Singles Event	1,473.0	Infinite	→
10	LAS Singles Event	92.7	Infinite	→
11	GR-LAS Coincidence	462.8	Infinite	→
12	LAS Singles Sampling	92.7	Infinite	→
13	LAS Trigger	643.3	Infinite	→
14	GR Singles Sampling	1,473.0	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→

Scalers

Run:	6032 (STOPPED)
Comment:	Sq 3mm U-2 GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 03:06:22
To:	2017/12/18 03:08:54
Duration:	152.0 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler UP	Scaler DOWN
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	169,408	167,601
2	GR Trigger Live	143,118	141,377
3	GR Clock	765,060	754,972
4	GR Clock Live	700,510	690,540
5	Broken Channel	0	0
6	LAS Trigger Live	46,581	45,409
7	LAS Clock	765,060	754,972
8	LAS Clock Live	700,990	691,001
9	GR Singles Event	104,058	103,361
10	LAS Singles Event	7,521	7,393
11	GR-LAS Coincidence	39,060	38,016
12	LAS Singles Sampling	7,521	7,393
13	LAS Trigger	53,046	51,727
14	GR Singles Sampling	104,058	103,361
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0

03:11 wsdev 0.582 に変更

E492 run sheet

signature: Nanamura.

Run#: 6033 Title: Sq 3mm U-3, (GR0deg, VDC~, dispersive)

Start time: 3:11:05 Stop time: 3:12:31 Target: Sq 3mm

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.919 [mT] D2: 889.927 [mT] Live: GR: 83.0 [%] LAS: 829 [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: ____

Ratemeters

Run:	6033 (RUNNING)
Comment:	Sq 3mm U-3 GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 03:10:59
To:	2017/12/18 03:11:00
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	85.2 %
LAS Live:	88.5 %
Clock Live:	91.2 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,325.0	Infinite	→
2	GR Trigger Live	1,980.3	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,115.1	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,021.9	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,120.1	Infinite	→
9	GR Singles Event	1,048.8	Infinite	→
10	LAS Singles Event	90.4	Infinite	→
11	GR-LAS Coincidence	931.6	Infinite	→
12	LAS Singles Sampling	90.4	Infinite	→
13	LAS Trigger	1,155.0	Infinite	→
14	GR Singles Sampling	1,048.8	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→

Scalers

Run:	6033 (STOPPED)
Comment:	Sq 3mm U-3 GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 03:10:53
To:	2017/12/18 03:12:31
Duration:	97.7 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler SPIN UP	Scaler DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	115,464	117,355
2	GR Trigger Live	95,748	97,009
3	GR Clock	483,289	493,348
4	GR Clock Live	440,187	448,911
5	Broken Channel	0	0
6	LAS Trigger Live	46,127	46,609
7	LAS Clock	483,289	493,348
8	LAS Clock Live	440,478	449,194
9	GR Singles Event	54,697	55,615
10	LAS Singles Event	5,078	5,215
11	GR-LAS Coincidence	41,051	41,394
12	LAS Singles Sampling	5,078	5,215
13	LAS Trigger	52,853	53,722
14	GR Singles Sampling	54,697	55,615
15	GR Trigger (500nsec)	0	0

E492 run sheet

signature: Nanamura

Run#: 6034 Title: Sq 3mm C (GR 0deg, VDC~, dispersive)

Start time: 3:15:48 Stop time: 3:16:34 Target: Sq 3mm

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.918 [mT] D2: 889.928 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: ____

Ratemeters

Run:	6034 (RUNNING)
Comment:	Sq 3mm C GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 03:15:52
To:	2017/12/18 03:15:53
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	83.6 %
LAS Live:	88.3 %
Clock Live:	91.3 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,301.6	Infinite	→
2	GR Trigger Live	1,925.1	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,127.8	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,357.9	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,131.8	Infinite	→
9	GR Singles Event	690.4	Infinite	→
10	LAS Singles Event	123.2	Infinite	→
11	GR-LAS Coincidence	1,234.7	Infinite	→
12	LAS Singles Sampling	123.2	Infinite	→
13	LAS Trigger	1,538.7	Infinite	→
14	GR Singles Sampling	690.4	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→

usden 0.620 data 6035 junk.

E492 run sheet signature: Nanamura

Run#: 6036 Title: Sq 3mm D-3 (GR 0 deg, VDC 5.7 kV, dispersive)

Start time: 3:21:56 Stop time: 3:23:17 Target: Sq 3mm

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 (V)

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.942 [mT] D2: 889.935 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: ____

Ratemeters

Run:	6036 (RUNNING)
Comment:	Sq 3mm D-3 GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 03:23:11
To:	2017/12/18 03:23:12
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	85.4 %
LAS Live:	85.7 %
Clock Live:	91.6 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,160.9	Infinite	→
2	GR Trigger Live	1,845.1	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,156.9	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,704.1	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,160.9	Infinite	→
9	GR Singles Event	268.1	Infinite	→
10	LAS Singles Event	127.1	Infinite	→
11	GR-LAS Coincidence	1,577.0	Infinite	→
12	LAS Singles Sampling	127.1	Infinite	→
13	LAS Trigger	1,988.1	Infinite	→
14	GR Singles Sampling	268.1	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→

Scalers

Run:	6036 (STOPPED)
Comment:	Sq 3mm D-3 GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 03:21:55
To:	2017/12/18 03:23:17
Duration:	82.6 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler SPIN UP	Scaler SPIN DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	89,723	89,553
2	GR Trigger Live	75,945	75,784
3	GR Clock	412,812	412,751
4	GR Clock Live	377,810	378,151
5	Broken Channel	0	0
6	LAS Trigger Live	69,821	69,803
7	LAS Clock	412,812	412,751
8	LAS Clock Live	377,963	378,305
9	GR Singles Event	10,957	10,832
10	LAS Singles Event	4,833	4,851
11	GR-LAS Coincidence	64,988	64,952
12	LAS Singles Sampling	4,833	4,851
13	LAS Trigger	79,256	79,331
14	GR Singles Sampling	10,957	10,832
15	GR Trigger (500nsec)	0	0

wSdeV 0.640 に変更

E492 run sheet signature: Nanamura

Run#: 6037 Title: Sq 3mm D-2 (GR 0 deg, VDC 5.7 kV, dispersive)

Start time: 3:25:17 Stop time: 3:27:08 Target: Sq 3mm

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 (V)

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.920 [mT] D2: 889.929 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: ____

wSdeV 0.7660 変更.

Run6038 junk

E492 run sheet signature: Nanamura.

Run#: 6039 Title: Sq 3mm D-1 ~

Start time: 3:32:57 Stop time: 3:34:08 Target: Sq 3mm

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57. [V]

ER trigger: (self) / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.910 [mT] D2: 889.928 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

Ratemeters

Run:	6039 (RUNNING)
Comment:	Sq 3mm D-1 GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 03:33:22
To:	2017/12/18 03:33:23
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	81.9 %
LAS Live:	88.5 %
Clock Live:	91.0 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,426.5	Infinite	→
2	GR Trigger Live	1,988.5	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,102.1	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,670.6	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,106.1	Infinite	→
9	GR Singles Event	433.1	Infinite	→
10	LAS Singles Event	115.2	Infinite	→
11	GR-LAS Coincidence	1,555.4	Infinite	→
12	LAS Singles Sampling	115.2	Infinite	→
13	LAS Trigger	1,887.2	Infinite	→
14	GR Singles Sampling	433.1	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→

ビームの軸が変動していた時に撮ったかもしれない？

0.678 （どこにも合わせていない）

D-minus 1 のスタンバイ.

E492 run sheet signature: Nanamura

Run#: 6040 Title: Sq 3mm U-3 (GR 0deg. VDC ~, dispersive)

Start time: 3:41:02 Stop time: 3:42:37 Target: Sq 3mm

GR angle: 0°. Temp Ladder: ____ [°C] room: ____ [°C] HV: 57. [V]

ER trigger: (self) / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.945 [mT] D2: 889.919 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ~~4.4~~ [Hz] COIN(11): ~~4.0~~ [Hz]

Comment: LAS trig. 7.4 kcps

~~おおおおお~~.

wsdev: 0.582 にした.

E492 run sheet signature: Nanamura

Run#: 6041 Title: Sq 3mm U-3(GR 0deg. VDC.)

Start time: 3:48:09 Stop time: 3:49:55 Target: 3mm ~~Sq~~.

GR angle: 0° Temp Ladder:_____ [°C] room:_____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.923 [mT] D2: 889.930 [mT] Live: GR:_____ [%] LAS:_____ [%]

GR single(7):_____ [Hz] LAS single(10):_____ [Hz] COIN(11):_____ [Hz]

Comment:

Ratemeters

Run:	6041 (RUNNING)
Comment:	Sq 3mm U-3 GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 03:48:46
To:	2017/12/18 03:48:47
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	80.1 %
LAS Live:	86.5 %
Clock Live:	91.2 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,448.8	Infinite	→
2	GR Trigger Live	1,961.1	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,117.8	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	898.1	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,123.8	Infinite	→
9	GR Singles Event	1,167.3	Infinite	→
10	LAS Singles Event	104.3	Infinite	→
11	GR-LAS Coincidence	793.8	Infinite	→
12	LAS Singles Sampling	104.3	Infinite	→
13	LAS Trigger	1,038.1	Infinite	→
14	GR Singles Sampling	1,167.3	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→

Scalers

Run:	6041 (STOPPED)
Comment:	Sq 3mm U-3 GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 03:48:09
To:	2017/12/18 03:49:55
Duration:	105.7 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler SPIN	Scaler BLP1	Scaler BLP2
		UP	OUT	OUT
		DOWN	OUT	OUT
0	Beam Intensity	0	0	
1	GR Trigger	129,947	126,840	
2	GR Trigger Live	107,019	104,108	
3	GR Clock	533,578	523,518	
4	GR Clock Live	484,977	476,450	
5	Broken Channel	0	0	
6	LAS Trigger Live	49,369	48,157	
7	LAS Clock	533,578	523,518	
8	LAS Clock Live	485,292	476,769	
9	GR Singles Event	63,038	61,367	
10	LAS Singles Event	5,388	5,418	
11	GR-LAS Coincidence	43,981	42,739	
12	LAS Singles Sampling	5,388	5,418	
13	LAS Trigger	56,937	55,803	
14	GR Singles Sampling	63,038	61,367	
15	GR Trigger (500nsec)	0	0	
16	BLP1 Left	0	0	

前回とレートが下がった.

Fiber (beam) position Search.

E492 run sheet signature: Nanamura

Run#: 6042 Title: Position search. for Sq. 3mm

Start time: 3:54:36 Stop time: 4:05:06 Target: Sq 3mm.

GR angle: 0° Temp Ladder:_____ [°C] room:_____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.945 [mT] D2: 889.921 [mT] Live: GR:_____ [%] LAS:_____ [%]

GR single(7):_____ [Hz] LAS single(10):_____ [Hz] COIN(11):_____ [Hz]

Comment:

E492 run sheet signature: Nanamura

Run#: 6043 Title: Position search for Sq 3mm.

Start time: 4:06:39 Stop time: 4:15 Target: 3mm Sq.

GR angle: 0° Temp Ladder:_____ [°C] room:_____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.921 [mT] D2: 889.931 [mT] Live: GR:_____ [%] LAS:_____ [%]

GR single(7):_____ [Hz] LAS single(10):_____ [Hz] COIN(11):_____ [Hz]

Comment: VDC tripped.

E492 run sheet signature: Nanamura

Run#: 6044 Title: Position Search for Sq 3mm (GR 0deg, ~).

Start time: 4:15:00 Stop time: 4:20:48 Target: 3mm Sq.

GR angle: 0° Temp Ladder:_____ [°C] room:_____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.921 [mT] D2: 889.928 [mT] Live: GR:_____ [%] LAS:_____ [%]

GR single(7):_____ [Hz] LAS single(10):_____ [Hz] COIN(11):_____ [Hz]

Comment:

E492 run sheet signature: Nanamura

Run#: 6045 Title: Position search (for ~)

Start time: 4:21:51 Stop time: 4:50:05 Target: 3 moving

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

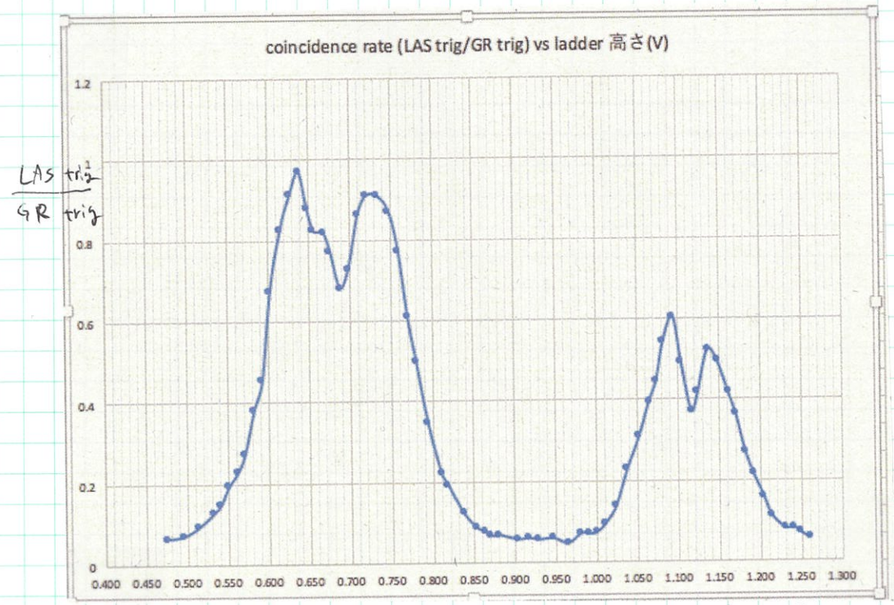
ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.923 [mT] D2: 889.929 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

wsdev 0.582 (3mm□ U)



ラダー高さを変えながら LAS trig / GR trig の変化を search

E492 run sheet signature: Nanamura

Run#: 6046 Title: Sq 3mm U (GR 0 deg ~)

Start time: 5:16:29 Stop time: 5:19:13 Target: Sq 3mm.

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.921 [mT] D2: 889.910 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

Ratemeters

Run:	6046 (RUNNING)
Comment:	Sq 3mm U GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:18:48
To:	2017/12/18 05:18:49
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	82.1 %
LAS Live:	86.5 %
Clock Live:	92.1 %

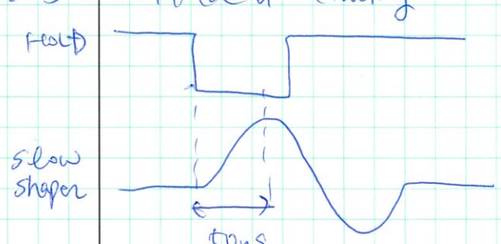
Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,134.7	Infinite	→
2	GR Trigger Live	1,753.3	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,207.3	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	542.4	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,213.3	Infinite	→
9	GR Singles Event	1,311.2	Infinite	→
10	LAS Singles Event	100.3	Infinite	→
11	GR-LAS Coincidence	442.0	Infinite	→
12	LAS Singles Sampling	100.3	Infinite	→
13	LAS Trigger	626.8	Infinite	→
14	GR Singles Sampling	1,311.2	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→

Scalers

Run:	6046 (STOPPED)
Comment:	Sq 3mm U GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:16:29
To:	2017/12/18 05:19:13
Duration:	164.1 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	171,291	174,303
2	GR Trigger Live	144,118	146,204
3	GR Clock	815,462	825,573
4	GR Clock Live	750,219	759,440
5	Broken Channel	0	0
6	LAS Trigger Live	46,010	47,035
7	LAS Clock	815,462	825,573
8	LAS Clock Live	750,697	759,923
9	GR Singles Event	105,608	106,878
10	LAS Singles Event	7,500	7,709
11	GR-LAS Coincidence	38,510	39,326
12	LAS Singles Sampling	7,500	7,709
13	LAS Trigger	52,362	53,835
14	GR Singles Sampling	105,608	106,878
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0

05:25 Hold a Timing



が最適にみえる.

LED の再現性がどれくらいか?

E492 run sheet signature: Nanamura

Run#: 6047 Title: Sq 3mm C (~)

Start time: 5:24:27 Stop time: 5:25:22 Target: Sq 3mm.

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.945 [mT] D2: 889.912 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

Scalers

Run:	6047 (STOPPED)
Comment:	Sq 3mm C GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:24:27
To:	2017/12/18 05:25:22
Duration:	54.4 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	62,046	61,589
2	GR Trigger Live	51,576	51,125
3	GR Clock	271,908	271,819
4	GR Clock Live	248,393	248,173
5	Broken Channel	0	0
6	LAS Trigger Live	51,628	51,258
7	LAS Clock	271,908	271,819
8	LAS Clock Live	248,482	248,271
9	GR Singles Event	3,138	3,070
10	LAS Singles Event	3,190	3,203
11	GR-LAS Coincidence	48,438	48,055
12	LAS Singles Sampling	3,190	3,203
13	LAS Trigger	58,241	58,070
14	GR Singles Sampling	3,138	3,070
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0

Ratemeters

Run:	6047 (RUNNING)
Comment:	Sq 3mm C GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:24:58
To:	2017/12/18 05:24:59
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	83.1 %
LAS Live:	89.2 %
Clock Live:	91.4 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,296.4	Infinite	→
2	GR Trigger Live	1,908.0	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,136.9	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,891.1	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,141.8	Infinite	→
9	GR Singles Event	127.1	Infinite	→
10	LAS Singles Event	110.3	Infinite	→
11	GR-LAS Coincidence	1,780.9	Infinite	→
12	LAS Singles Sampling	110.3	Infinite	→
13	LAS Trigger	2,120.8	Infinite	→
14	GR Singles Sampling	127.1	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→

0.696

E492 run sheet signature: Nanamura

Run#: 6048 Title: Sq 3mm D ~

Start time: 5:26:24 Stop time: 5:27:29 Target: Sq 3mm

GR angle: 0° Temp Ladder:____ [°C] room:____[°C] HV: ____[V]

ER trigger: (self) / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.937 [mT] D2: 889.929 [mT] Live: GR:____[%] LAS:____[%]

GR single(7):____[Hz] LAS single(10):____[Hz] COIN(11):____[Hz]

Comment:

Ratemeters

Run:	6048 (RUNNING)
Comment:	Sq 3mm D GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:26:59
To:	2017/12/18 05:27:00
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	81.3 %
LAS Live:	87.1 %
Clock Live:	91.3 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,382.6	Infinite	→
2	GR Trigger Live	1,921.5	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,133.6	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,581.7	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,137.6	Infinite	→
9	GR Singles Event	446.1	Infinite	→
10	LAS Singles Event	106.3	Infinite	→
11	GR-LAS Coincidence	1,475.4	Infinite	→
12	LAS Singles Sampling	106.3	Infinite	→
13	LAS Trigger	1,816.2	Infinite	→
14	GR Singles Sampling	446.1	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→

Scalers

Run:	6048 (STOPPED)
Comment:	Sq 3mm D GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:26:24
To:	2017/12/18 05:27:29
Duration:	64.4 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler SPIN UP	Scaler DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	75,644	75,428
2	GR Trigger Live	62,054	62,315
3	GR Clock	322,129	322,090
4	GR Clock Live	293,660	293,864
5	Broken Channel	0	0
6	LAS Trigger Live	52,085	52,582
7	LAS Clock	322,129	322,090
8	LAS Clock Live	293,799	293,997
9	GR Singles Event	13,701	13,533
10	LAS Singles Event	3,732	3,780
11	GR-LAS Coincidence	48,353	48,782
12	LAS Singles Sampling	3,732	3,780
13	LAS Trigger	59,613	59,835
14	GR Singles Sampling	13,701	13,533
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0
20	BLP1 Left Chance	0	0
21	BLP1 Right Chance	0	0
22	BLP1 Up Chance	0	0

E492 run sheet signature: Nanamura

Run#: 6049 Title: beam through, GR 0 deg, VDC ~)

Start time: 5:29:16 Stop time: 5:31:02 Target: Blank

GR angle: 0° Temp Ladder:____ [°C] room:____[°C] HV: 57 [V]

ER trigger: (self) / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.921 [mT] D2: 889.929 [mT] Live: GR:____[%] LAS:____[%]

GR single(7):____[Hz] LAS single(10):____[Hz] COIN(11):____[Hz]

Comment:

Ratemeters

Run:	6049 (RUNNING)
Comment:	beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:29:56
To:	2017/12/18 05:29:57
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	84.0 %
LAS Live:	95.2 %
Clock Live:	91.8 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,169.1	Infinite	→
2	GR Trigger Live	1,839.5	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,181.6	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	79.5	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,187.5	Infinite	→
9	GR Singles Event	1,838.5	Infinite	→
10	LAS Singles Event	78.5	Infinite	→
11	GR-LAS Coincidence	1.0	Infinite	→
12	LAS Singles Sampling	78.5	Infinite	→
13	LAS Trigger	83.4	Infinite	→
14	GR Singles Sampling	1,838.5	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→

Scalers

Run:	6049 (STOPPED)
Comment:	beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:29:16
To:	2017/12/18 05:31:02
Duration:	105.7 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler SPIN UP	Scaler DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	112,916	110,249
2	GR Trigger Live	94,735	92,713
3	GR Clock	533,704	523,565
4	GR Clock Live	490,867	481,644
5	Broken Channel	0	0
6	LAS Trigger Live	4,643	4,516
7	LAS Clock	533,704	523,565
8	LAS Clock Live	491,235	482,013
9	GR Singles Event	94,730	92,712
10	LAS Singles Event	4,638	4,515
11	GR-LAS Coincidence	5	1
12	LAS Singles Sampling	4,638	4,515
13	LAS Trigger	5,041	4,891
14	GR Singles Sampling	94,730	92,712
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0

LED ✓

Beam が止まる状況にデータをとる.

trigger : self + LED. target : blank

Run 6050.

E492 run sheet signature: Nanamura.

Run#: 6050 Title: beam through, LED on, self, LED trig, ~

Start time: 5:37:20 Stop time: 5:38:51 Target: Blank.

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57. [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) ____ [ns] (LG) ____ [ns]

D1: 889.922 [mT] D2: 889.915 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: LED 2.4 V

今夜は trigger : LED のみ

Run 6051.

E492 run sheet signature: Nanamura.

Run#: 6051 Title: beam through, LED on, LED trig, ~

Start time: 5:41:13. Stop time: 5:42:47 Target: blank.

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57. [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: ____ [mT] D2: ____ [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: ____

- F.G. 2.4 V, trig : LED calib 2008
- F.G. 2.3 V, trig : LED calib 2009

5:55 次は ○ 3mm.

wsdev : 0.668 (up)

E492 run sheet signature: 七村.

Run#: 6052 Title: Phi 3mm U (GR0deg ~)

Start time: 5:55:06 Stop time: ____ Target: Phi 3mm

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: ____ [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.922 [mT] D2: 889.931 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: ビーム出ている.

Ratemeters

Run:	6052 (RUNNING)
Comment:	Phi 3mm U GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:56:21
To:	2017/12/18 05:56:22
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	83.3 %
LAS Live:	89.4 %
Clock Live:	92.2 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,055.0	Infinite	→
2	GR Trigger Live	1,712.4	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,223.3	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,429.3	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,227.3	Infinite	→
9	GR Singles Event	387.4	Infinite	→
10	LAS Singles Event	104.3	Infinite	→
11	GR-LAS Coincidence	1,325.0	Infinite	→
12	LAS Singles Sampling	104.3	Infinite	→
13	LAS Trigger	1,599.1	Infinite	→
14	GR Singles Sampling	387.4	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→

Scalers

Run:	6052 (STOPPED)
Comment:	Phi 3mm U GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:55:06
To:	2017/12/18 05:57:12
Duration:	125.8 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler UP	Scaler DOWN
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	66,004	64,896
2	GR Trigger Live	55,397	54,582
3	GR Clock	634,303	624,196
4	GR Clock Live	607,663	598,046
5	Broken Channel	0	0
6	LAS Trigger Live	53,986	53,049
7	LAS Clock	634,303	624,196
8	LAS Clock Live	607,784	598,158
9	GR Singles Event	7,824	7,942
10	LAS Singles Event	6,413	6,429
11	GR-LAS Coincidence	47,573	46,619
12	LAS Singles Sampling	6,413	6,429
13	LAS Trigger	60,514	59,328
14	GR Singles Sampling	7,824	7,942
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0

E492 run sheet signature: Nanamura

Run#: 6053 Title: Phi 3mm () (GRodeg ~)

Start time: 5:57:52 Stop time: ~~5:58:48~~ 5:59:24 Target: Phi 3mm

GR angle: 0° Temp Ladder:____ [°C] room:____[°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.921 [mT] D2: 889.931 [mT] Live: GR:____[%] LAS:____[%]

GR single(7):____[Hz] LAS single(10):____[Hz] COIN(11):____[Hz]

Comment:

Ratemeters

Run:	6053 (RUNNING)
Comment:	Phi 3mm U GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:58:10
To:	2017/12/18 05:58:11
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	82.1 %
LAS Live:	88.7 %
Clock Live:	91.4 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,291.7	Infinite	→
2	GR Trigger Live	1,881.6	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,141.1	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,735.7	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,146.1	Infinite	→
9	GR Singles Event	273.1	Infinite	→
10	LAS Singles Event	127.1	Infinite	→
11	GR-LAS Coincidence	1,608.6	Infinite	→
12	LAS Singles Sampling	127.1	Infinite	→
13	LAS Trigger	1,957.1	Infinite	→
14	GR Singles Sampling	273.1	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→
20	BLP1 Left Chance	0.0	NaN	→

Scalers

Run:	6053 (STOPPED)
Comment:	Phi 3mm U GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 05:57:52
To:	2017/12/18 05:59:24
Duration:	91.6 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	104,312	107,560
2	GR Trigger Live	85,611	88,380
3	GR Clock	453,175	463,086
4	GR Clock Live	414,158	422,617
5	Broken Channel	0	0
6	LAS Trigger Live	79,857	82,149
7	LAS Clock	453,175	463,086
8	LAS Clock Live	414,326	422,795
9	GR Singles Event	11,166	11,620
10	LAS Singles Event	5,411	5,388
11	GR-LAS Coincidence	74,445	76,760
12	LAS Singles Sampling	5,411	5,386
13	LAS Trigger	92,923	95,655
14	GR Singles Sampling	11,166	11,620
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0

WS 0.72

E492 run sheet signature: Sakae

Run#: 6054 Title: ϕ3mm .C GR 0deg. VDC 5.7kV P 0.3kV dispersive mode

Start time: 6:01:09 Stop time: 6:02:04 Target: ϕ3mm

GR angle: 0 Temp Ladder:____ [°C] room:____[°C] HV:____[V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1:____[mT] D2:____[mT] Live: GR:____[%] LAS:____[%]

GR single(7): 2200 [Hz] LAS single(10): 2100 [Hz] COIN(11):____[Hz]

Comment:

Ratemeters

Run:	6054 (RUNNING)
Comment:	Phi 3mm C GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 06:01:32
To:	2017/12/18 06:01:33
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	81.3 %
LAS Live:	87.5 %
Clock Live:	91.2 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,378.6	Infinite	→
2	GR Trigger Live	1,933.7	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,124.0	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,881.0	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,127.0	Infinite	→
9	GR Singles Event	172.8	Infinite	→
10	LAS Singles Event	120.2	Infinite	→
11	GR-LAS Coincidence	1,760.9	Infinite	→
12	LAS Singles Sampling	120.2	Infinite	→
13	LAS Trigger	2,150.2	Infinite	→
14	GR Singles Sampling	172.8	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→

Scalers

Run:	6054 (STOPPED)
Comment:	Phi 3mm C GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 06:01:09
To:	2017/12/18 06:02:04
Duration:	55.4 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	66,504	63,968
2	GR Trigger Live	54,435	52,455
3	GR Clock	281,947	271,810
4	GR Clock Live	256,895	248,080
5	Broken Channel	0	0
6	LAS Trigger Live	53,357	51,529
7	LAS Clock	281,947	271,810
8	LAS Clock Live	256,998	248,177
9	GR Singles Event	4,441	4,078
10	LAS Singles Event	3,363	3,152
11	GR-LAS Coincidence	49,994	48,377
12	LAS Singles Sampling	3,363	3,152
13	LAS Trigger	61,086	58,837
14	GR Singles Sampling	4,441	4,078
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0

E492 run sheet 0.782 signature: Koshikawa

Run#: 6055 Title: φ3mmD GR 0°

Start time: 6:03:20 Stop time: 6:05:34 Target: φ3D

GR angle: 0 Temp Ladder: 23.41 [°C] room: 21.98 [°C] HV: 58 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.922 [mT] D2: 889.929 [mT] Live: GR: _____ [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment:

Ratemeters

Run:	6055 (RUNNING)
Comment:	Phi 3mm D GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 06:03:33
To:	2017/12/18 06:03:34
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	84.0 %
LAS Live:	89.9 %
Clock Live:	91.9 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,161.9	Infinite	→
2	GR Trigger Live	1,815.3	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,185.7	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	698.1	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,190.7	Infinite	→
9	GR Singles Event	1,211.5	Infinite	→
10	LAS Singles Event	94.3	Infinite	→
11	GR-LAS Coincidence	603.8	Infinite	→
12	LAS Singles Sampling	94.3	Infinite	→
13	LAS Trigger	776.6	Infinite	→
14	GR Singles Sampling	1,211.5	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→

Scalers

Run:	6055 (STOPPED)
Comment:	Phi 3mm D GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 06:03:20
To:	2017/12/18 06:05:34
Duration:	133.9 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler SPIN UP	Scaler SPIN DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	144,843	142,461
2	GR Trigger Live	120,579	118,518
3	GR Clock	674,579	664,507
4	GR Clock Live	620,072	610,845
5	Broken Channel	0	0
6	LAS Trigger Live	46,660	45,928
7	LAS Clock	674,579	664,507
8	LAS Clock Live	620,455	611,218
9	GR Singles Event	80,033	78,740
10	LAS Singles Event	6,114	6,150
11	GR-LAS Coincidence	40,546	39,778
12	LAS Singles Sampling	6,114	6,150
13	LAS Trigger	53,554	52,541
14	GR Singles Sampling	80,033	78,740
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0
20	BLP1 Left Chance	0	0

ハードウェアトリガーする原因がわからないので，

LED + φ3D をとってみる．

- Trigger: ~~LED~~ LED + self Run 6056
- trigger: LED Run 6057

E492 run sheet signature: Sakane

Run#: 6056 Title: LED+. φ3mm. D. GR20°

Start time: 06:07:03 Stop time: 06:07:46 Target: φ3mm. D

GR angle: 0° Temp Ladder: _____ [°C] room: _____ [°C] HV: _____ [V]

ER trigger: self / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: 889.924 [mT] D2: 889.912 [mT] Live: GR: _____ [%] LAS: _____ [%]

GR single(7): 2100 [Hz] LAS single(10): 2500 [Hz] COIN(11): _____ [Hz]

Comment:

E492 run sheet signature: Sakane

Run#: 6057 Title: LED + φ3mm D trig = LED only

Start time: 06:~~09~~:01 Stop time: 06:10:56 Target: φ3mm. D

GR angle: 0° Temp Ladder: _____ [°C] room: _____ [°C] HV: _____ [V]

ER trigger: self / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: _____ [mT] D2: _____ [mT] Live: GR: _____ [%] LAS: _____ [%]

GR single(7): 2200 [Hz] LAS single(10): 2000 [Hz] COIN(11): _____ [Hz]

Comment:

E492 run sheet signature: Nanamura

Run#: 6058 Title: beamthrough, GR0deg, ~

Start time: 6:12:04 Stop time: 6:14:03 Target: Blank

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: ____ [V]

ER trigger: self / LED DAC: ____ Shaping Time: (HG) ____ [ns] (LG) ____ [ns]

D1: 889.939 [mT] D2: 889.931 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: Resolution 17.8 keV,

Ratemeters

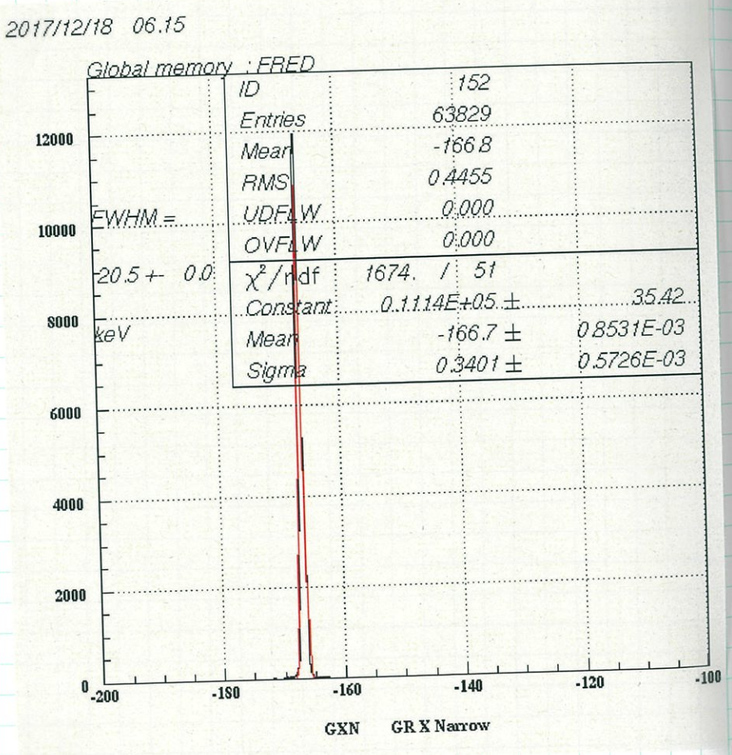
Run:	6058 (RUNNING)
Comment:	beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 06:12:42
To:	2017/12/18 06:12:43
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	81.8 %
LAS Live:	NaN %
Clock Live:	91.7 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,384.0	Infinite	→
2	GR Trigger Live	1,949.9	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,168.6	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	0.0	NaN	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,175.5	Infinite	→
9	GR Singles Event	1,949.9	Infinite	→
10	LAS Singles Event	0.0	NaN	→
11	GR-LAS Coincidence	0.0	NaN	→
12	LAS Singles Sampling	0.0	NaN	→
13	LAS Trigger	0.0	NaN	→
14	GR Singles Sampling	1,949.9	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→

Scalers

Run:	6058 (STOPPED)
Comment:	beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 06:12:04
To:	2017/12/18 06:14:03
Duration:	118.8 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler UP	Scaler DOWN
	SPIN	OUT	OUT
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	144,960	144,738
2	GR Trigger Live	118,867	118,451
3	GR Clock	593,980	594,010
4	GR Clock Live	542,860	542,927
5	Broken Channel	0	0
6	LAS Trigger Live	0	0
7	LAS Clock	593,980	594,010
8	LAS Clock Live	543,311	543,380
9	GR Singles Event	118,867	118,451
10	LAS Singles Event	0	0
11	GR-LAS Coincidence	0	0
12	LAS Singles Sampling	0	0
13	LAS Trigger	0	0
14	GR Singles Sampling	118,867	118,451
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0
20	BLP1 Left Chance	0	0
21	BLP1 Right Chance	0	0



F.G. 2.3 V. trig: LED calib 2010
F.G 2.4V .trig: LED calib 2011
F.G 2.4 V. trig: LED calib 2012
(2011取得中にラダーを動かしてしまったため)

E492 run sheet signature: Nanamura

Run#: 6059 Title: Sn 1mm (GR~

Start time: 6:24:11 Stop time: 6:26:15 Target: Sn 1mm

GR angle: ____ Temp Ladder: ____ [°C] room: ____ [°C] HV: ____ [V]

ER trigger: self / (LED) DAC: ____ Shaping Time: (HG) ____ [ns] (LG) ____ [ns]

D1: ____ [mT] D2: ____ [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: EASIROC トリガーまちがい。
Junk.

E492 run sheet signature: Nanamura

Run#: 6060 Title: Sn 1mm (GR 0deg. ~

Start time: 6:26:42 Stop time: 6:27:21 Target: Sn 1mm

GR angle: ____ Temp Ladder: ____ [°C] room: ____ [°C] HV: ____ [V]

ER trigger: self / LED DAC: ____ Shaping Time: (HG) ____ [ns] (LG) ____ [ns]

D1: ____ [mT] D2: ____ [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: LEDトリガー抜き忘れ。
Junk.

E492 run sheet signature: Nanamura

Run#: 6061 Title: Sq 1mm (GR 0deg. ~)

Start time: 6:29:11 Stop time: ~~6:30:~~ 6:31:15 Target: Sq 1mm

GR angle: 0° Temp Ladder:____ [°C] room:____[°C] HV: 57 [V]

ER trigger: (self) / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.923 [mT] D2: 889.926 [mT] Live: GR:____[%] LAS:____[%]

GR single(7):____[Hz] LAS single(10):____[Hz] COIN(11):____[Hz]

Comment:

Scalers

Run: 6061 (STOPPED)
Comment: Sq 1mm GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 06:29:11
To: 2017/12/18 06:31:15
Duration: 123.8 sec
BI Range: 6.00 nA
Beam Charge: .00 nC

Ch#	Name	Scaler SPIN UP	Scaler DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	136,980	140,426
2	GR Trigger Live	113,150	115,671
3	GR Clock	614,140	624,258
4	GR Clock Live	563,087	571,274
5	Broken Channel	0	0
6	LAS Trigger Live	74,535	75,998
7	LAS Clock	614,140	624,258
8	LAS Clock Live	563,377	571,576
9	GR Singles Event	44,740	45,802
10	LAS Singles Event	6,125	6,128
11	GR-LAS Coincidence	68,410	69,869
12	LAS Singles Sampling	6,125	6,128
13	LAS Trigger	86,548	88,378
14	GR Singles Sampling	44,740	45,802
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0

wSdev : 1.136 (0 1mm a°Fit)

E492 run sheet signature: Nanamura

Run#: 6062 Title: Phi 1mm (GR ~)

Start time: 6:33:02 Stop time: ~~6:33:17~~ 6:34:26 Target: Phi 1mm

GR angle: 0° Temp Ladder:____ [°C] room:____[°C] HV: 57 [V]

ER trigger: (self) / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.923 [mT] D2: 889.916 [mT] Live: GR:____[%] LAS:____[%]

GR single(7):____[Hz] LAS single(10):____[Hz] COIN(11):____[Hz]

Comment:

Ratemeters

Run: 6062 (RUNNING)
Comment: Phi 1mm GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 06:33:23
To: 2017/12/18 06:33:24
Duration: 1.0 sec
Spin: DOWN
BLP1: OUT
BLP2: OUT
BI Range: 6.00 nA
Beam Current: 0.00 nA
GR Live: 84.7 %
LAS Live: 90.3 %
Clock Live: 92.4 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	1,977.6	Infinite	→
2	GR Trigger Live	1,674.6	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,237.2	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,124.4	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,242.2	Infinite	→
9	GR Singles Event	660.5	Infinite	→
10	LAS Singles Event	110.3	Infinite	→
11	GR-LAS Coincidence	1,014.1	Infinite	→
12	LAS Singles Sampling	110.3	Infinite	→
13	LAS Trigger	1,244.5	Infinite	→
14	GR Singles Sampling	660.5	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→
20	BLP1 Left Chance	0.0	NaN	→

Scalers

Run: 6062 (STOPPED)
Comment: Phi 1mm GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 06:33:02
To: 2017/12/18 06:34:26
Duration: 83.6 sec
BI Range: 6.00 nA
Beam Charge: .00 nC

Ch#	Name	Scaler SPIN UP	Scaler DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	86,068	88,801
2	GR Trigger Live	72,374	74,425
3	GR Clock	412,780	422,867
4	GR Clock Live	380,093	388,338
5	Broken Channel	0	0
6	LAS Trigger Live	48,563	49,661
7	LAS Clock	412,780	422,867
8	LAS Clock Live	380,278	388,531
9	GR Singles Event	27,981	28,928
10	LAS Singles Event	4,170	4,164
11	GR-LAS Coincidence	44,393	45,497
12	LAS Singles Sampling	4,170	4,164
13	LAS Trigger	54,825	56,231
14	GR Singles Sampling	27,981	28,928
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0

E492 run sheet

signature: Nanamura

Run#: 6063 Title: beam through, GR0 deg.

Start time: ~~6:32:02~~ 6:30:23 Stop time: 6:38:11 Target: blank

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 - [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) ____ [ns] (LG) ____ [ns]

D1: 889.922 [mT] D2: 889.929 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: Resolution 21 keV

Ratemeters

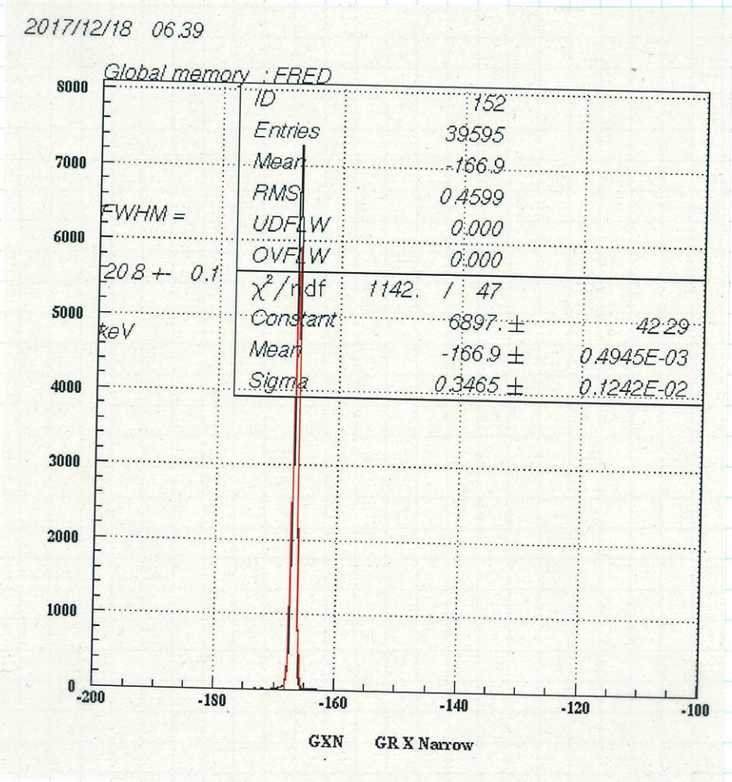
Run:	6063 (RUNNING)
Comment:	beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 06:36:44
To:	2017/12/18 06:36:45
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	85.1 %
LAS Live:	91.2 %
Clock Live:	92.1 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,063.0	Infinite	→
2	GR Trigger Live	1,756.1	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,210.4	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	92.4	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,217.3	Infinite	→
9	GR Singles Event	1,756.1	Infinite	→
10	LAS Singles Event	92.4	Infinite	→
11	GR-LAS Coincidence	0.0	NaN	→
12	LAS Singles Sampling	92.4	Infinite	→
13	LAS Trigger	101.3	Infinite	→
14	GR Singles Sampling	1,756.1	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→

Scalers

Run:	6063 (STOPPED)
Comment:	beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 06:36:23
To:	2017/12/18 06:38:11
Duration:	107.7 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler UP	Scaler DOWN
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	115,147	113,018
2	GR Trigger Live	98,938	94,991
3	GR Clock	543,692	533,585
4	GR Clock Live	499,988	490,655
5	Broken Channel	0	0
6	LAS Trigger Live	4,691	4,494
7	LAS Clock	543,692	533,585
8	LAS Clock Live	500,375	491,020
9	GR Singles Event	96,936	94,987
10	LAS Singles Event	4,689	4,490
11	GR-LAS Coincidence	2	4
12	LAS Singles Sampling	4,689	4,490
13	LAS Trigger	5,088	4,933
14	GR Singles Sampling	96,936	94,987
15	GR Trigger (500nsec)	0	0



F.G 2.3V trig:LED, calib 2013 (onbeam)

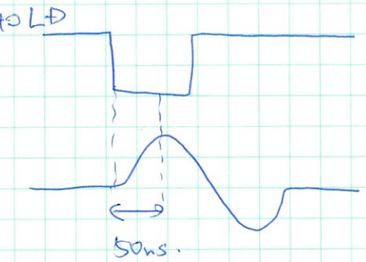
F.G 2.2V trig:LED, calib 2014.

F.G. 2.4V trig:LED, calib 2015.

Shaping Time を変えてみる.

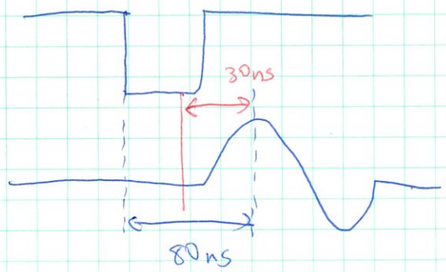
- 25ns, 75ns, 125ns, 175ns
- ...
- fiber : φ3, 中央

P.137



が最適値 (25nsの場合)

今、75nsに設定



となっている.

30ns 遅らせればよい.

E492 run sheet signature: Sakane

Run#: 6064 Title: Shaping time 75ns. φ3mm C. GR 0deg

Start time: 07:34:18 Stop time: 07:35:05 Target:

GR angle: Temp Ladder: [°C] room: [°C] HV: [V]

ER trigger: self / LED DAC: Shaping Time: (HG) [ns] (LG) [ns]

D1: [mT] D2: [mT] Live: GR: [%] LAS: [%]

GR single(7): [Hz] LAS single(10): [Hz] COIN(11): [Hz]

Comment: LED 入れたままだった (junk?)

Ratemeters

Run: 6064 (RUNNING)
Comment: Shaping Time 75ns, phi3 C , GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 07:34:25
To: 2017/12/18 07:34:26
Duration: 1.0 sec
Spin: UP
BLP1: OUT
BLP2: OUT
BI Range: 6.00 nA
Beam Current: 0.00 nA
GR Live: 80.6 %
LAS Live: 87.0 %
Clock Live: 89.6 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,837.1	Infinite	→
2	GR Trigger Live	2,286.6	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	8,957.6	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	2,267.7	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	8,963.5	Infinite	→
9	GR Singles Event	154.0	Infinite	→
10	LAS Singles Event	135.1	Infinite	→
11	GR-LAS Coincidence	2,132.6	Infinite	→
12	LAS Singles Sampling	135.1	Infinite	→
13	LAS Trigger	2,605.6	Infinite	→
14	GR Singles Sampling	154.0	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→
20	BLP1 Left Chance	0.0	NaN	→
21	BLP1 Right Chance	0.0	NaN	→
22	BLP1 Up Chance	0.0	NaN	→

Scalers

Run: 6064 (STOPPED)
Comment: Shaping Time 75ns, phi3 C , GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 07:34:18
To: 2017/12/18 07:35:05
Duration: 47.3 sec
BI Range: 6.00 nA
Beam Charge: .02 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	3
1	GR Trigger	67,293	70,652
2	GR Trigger Live	53,950	56,641
3	GR Clock	231,690	241,610
4	GR Clock Live	207,243	216,097
5	Broken Channel	0	0
6	LAS Trigger Live	52,850	55,396
7	LAS Clock	231,690	241,610
8	LAS Clock Live	207,387	216,237
9	GR Singles Event	4,039	4,304
10	LAS Singles Event	2,939	3,059
11	GR-LAS Coincidence	49,911	52,337
12	LAS Singles Sampling	2,939	3,059
13	LAS Trigger	61,282	64,505
14	GR Singles Sampling	4,039	4,304
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0

E492 run sheet signature: Sakane

Run#: 6065 Title: Shaping time 75ns. φ3mm C.

Start time: 07:36:04 Stop time: 07:37:08 Target: φ3mm C

GR angle: 0 Temp Ladder: [°C] room: [°C] HV: [V]

ER trigger: self / LED DAC: Shaping Time: (HG) 75 [ns] (LG) 75 [ns]

D1: 889.992 [mT] D2: 889.929 [mT] Live: GR: [%] LAS: [%]

GR single(7): 2.6k [Hz] LAS single(10): 2.7k [Hz] COIN(11): [Hz]

Comment:

Ratemeters

Run: 6065 (RUNNING)
Comment: Shaping Time 75ns, phi3 C , GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 07:36:29
To: 2017/12/18 07:36:30
Duration: 1.0 sec
Spin: DOWN
BLP1: OUT
BLP2: OUT
BI Range: 6.00 nA
Beam Current: 0.00 nA
GR Live: 78.6 %
LAS Live: 86.8 %
Clock Live: 89.6 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,910.5	Infinite	→
2	GR Trigger Live	2,288.7	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	8,963.9	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	2,285.7	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	8,969.9	Infinite	→
9	GR Singles Event	138.1	Infinite	→
10	LAS Singles Event	135.1	Infinite	→
11	GR-LAS Coincidence	2,150.6	Infinite	→
12	LAS Singles Sampling	135.1	Infinite	→
13	LAS Trigger	2,633.4	Infinite	→
14	GR Singles Sampling	138.1	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→

Scalers

Run: 6065 (STOPPED)
Comment: Shaping Time 75ns, phi3 C , GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 07:36:04
To: 2017/12/18 07:37:08
Duration: 64.4 sec
BI Range: 6.00 nA
Beam Charge: .02 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	3	1
1	GR Trigger	90,997	91,585
2	GR Trigger Live	72,730	73,080
3	GR Clock	322,226	322,205
4	GR Clock Live	289,460	288,774
5	Broken Channel	0	0
6	LAS Trigger Live	71,186	71,614
7	LAS Clock	322,226	322,205
8	LAS Clock Live	289,645	288,964
9	GR Singles Event	5,460	5,451
10	LAS Singles Event	3,916	3,985
11	GR-LAS Coincidence	67,270	67,629
12	LAS Singles Sampling	3,916	3,985
13	LAS Trigger	84,081	84,790
14	GR Singles Sampling	5,460	5,451
15	GR Trigger (500nsec)	0	0

Calibration (75ns)

F.C. 2.3V Calib 2016

2.4V Calib 2017

次は shaping Time 125ns

E492 run sheet signature: Sakaue

Run#: 6066 Title: Shaping time 125ns φ3mm C

Start time: 07:53:24 Stop time: 07:54:22 Target: φ3mm C.

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: ____ [V]

ER trigger: self / LED DAC: ____ Shaping Time: (HG) 125 [ns] (LG) 125 [ns]

D1: 889.939 [mT] D2: 889.918 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): 2.3k [Hz] LAS single(10): 2.1k [Hz] COIN(11): ____ [Hz]

Comment:

Ratemeters

Run:	6066 (RUNNING)
Comment:	Shaping Time 125ns, phi3 C , GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 07:53:44
To:	2017/12/18 07:53:45
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	82.9 %
LAS Live:	89.3 %
Clock Live:	91.4 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,271.8	Infinite	→
2	GR Trigger Live	1,884.4	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,144.7	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,912.2	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,150.7	Infinite	→
9	GR Singles Event	85.4	Infinite	→
10	LAS Singles Event	113.2	Infinite	→
11	GR-LAS Coincidence	1,798.9	Infinite	→
12	LAS Singles Sampling	113.2	Infinite	→
13	LAS Trigger	2,140.7	Infinite	→
14	GR Singles Sampling	85.4	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→

Scalers

Run:	6066 (STOPPED)
Comment:	Shaping Time 125ns, phi3 C , GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 07:53:24
To:	2017/12/18 07:54:22
Duration:	58.4 sec
BI Range:	6.00 nA
Beam Charge:	.01 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	2
1	GR Trigger	69,269	68,582
2	GR Trigger Live	57,077	56,544
3	GR Clock	291,908	292,059
4	GR Clock Live	266,041	266,013
5	Broken Channel	0	0
6	LAS Trigger Live	57,360	56,959
7	LAS Clock	291,908	292,059
8	LAS Clock Live	268,208	266,175
9	GR Singles Event	3,094	3,039
10	LAS Singles Event	3,377	3,453
11	GR-LAS Coincidence	53,963	53,505
12	LAS Singles Sampling	3,377	3,453
13	LAS Trigger	65,564	65,078
14	GR Singles Sampling	3,094	3,039
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0
20	BLP1 Left Chance	0	0

Calibration

2.3V のデータのみ補正できそう。

Calib2018

次は Shaping Time 175ns

E492 run sheet signature: Sakaue

Run#: 6067 Title: Shaping time 175ns. φ3mm C

Start time: 08:05:55 Stop time: 08:06:39 Target: φ3mm C

GR angle: ____ Temp Ladder: ____ [°C] room: ____ [°C] HV: ____ [V]

ER trigger: self / LED DAC: ____ Shaping Time: (HG) 175 [ns] (LG) 175 [ns]

D1: 889.922 [mT] D2: 889.927 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): 2.8k [Hz] LAS single(10): 2.6k [Hz] COIN(11): ____ [Hz]

Comment:

Ratemeters

Run:	6067 (RUNNING)
Comment:	Shaping Time 175ns, phi3 C , GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 08:06:06
To:	2017/12/18 08:06:07
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	82.1 %
LAS Live:	88.6 %
Clock Live:	89.6 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,789.9	Infinite	→
2	GR Trigger Live	2,290.1	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	8,960.8	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	2,310.0	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	8,968.7	Infinite	→
9	GR Singles Event	118.2	Infinite	→
10	LAS Singles Event	138.1	Infinite	→
11	GR-LAS Coincidence	2,171.9	Infinite	→
12	LAS Singles Sampling	138.1	Infinite	→
13	LAS Trigger	2,607.1	Infinite	→
14	GR Singles Sampling	118.2	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→

Calibration Calib2019 (2.3V)

次は再び 25ns でとる

E492 run sheet signature: Sakaue

Run#: 6068 Title: Shaping time 25ns φ3mC

Start time: 8:30:40 Stop time: 08:32:20 Target: φ3mmC

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: ____ [V]

ER trigger: self / LED DAC: ____ Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.922 [mT] D2: 889.929 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): 2.6k [Hz] LAS single(10): 2.4k [Hz] COIN(11): ____ [Hz]

Comment: ____

Ratemeters

Run:	6068 (RUNNING)
Comment:	Shaping Time 25ns, phi3 C , GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 08:30:47
To:	2017/12/18 08:30:48
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	80.9 %
LAS Live:	87.9 %
Clock Live:	90.8 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	2,519.4	Infinite	→
2	GR Trigger Live	2,037.7	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,081.4	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	2,056.6	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,085.4	Infinite	→
9	GR Singles Event	94.3	Infinite	→
10	LAS Singles Event	113.2	Infinite	→
11	GR-LAS Coincidence	1,943.4	Infinite	→
12	LAS Singles Sampling	113.2	Infinite	→
13	LAS Trigger	2,339.6	Infinite	→
14	GR Singles Sampling	94.3	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→

Scalers

Run:	6068 (STOPPED)
Comment:	Shaping Time 25ns, phi3 C , GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 08:30:40
To:	2017/12/18 08:32:20
Duration:	99.6 sec
BI Range:	6.00 nA
Beam Charge:	.02 nC

Ch#	Name	Scaler UP	Scaler DOWN
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	3
1	GR Trigger	128,417	131,979
2	GR Trigger Live	104,774	107,501
3	GR Clock	493,075	503,337
4	GR Clock Live	445,808	454,215
5	Broken Channel	0	0
6	LAS Trigger Live	105,820	108,804
7	LAS Clock	493,075	503,337
8	LAS Clock Live	446,014	454,434
9	GR Singles Event	4,817	4,710
10	LAS Singles Event	5,862	6,012
11	GR-LAS Coincidence	99,957	102,791
12	LAS Singles Sampling	5,862	6,012
13	LAS Trigger	125,242	129,025
14	GR Singles Sampling	4,817	4,710
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0

Calibration 2.3V calib2020

ビームがふたまたでした。

Calibration 2.3V calib2021

↳ Shaping Time を変えるときに

HOLD Timing を変え忘れていた!!

今年はこれ

8:46 25ns delay ~~799.~~ 499.883ns Calib ~~2020~~ 2022

75ns delay 499.868ns Calib 2023

125ns delay 499.838ns Calib 2024

175ns delay 499.808ns Calib 2025

E492 run sheet signature: Nagamura

Run#: 6069 Title: beam through, (GR 0deg, ~)

Start time: 9:06:07 Stop time: 9:07:37 Target: blank

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.922 [mT] D2: 889.926 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: resol 16.0 keV (FWHM)

Scalers

Run:	6069 (STOPPED)
Comment:	beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 09:06:07
To:	2017/12/18 09:07:37
Duration:	89.6 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

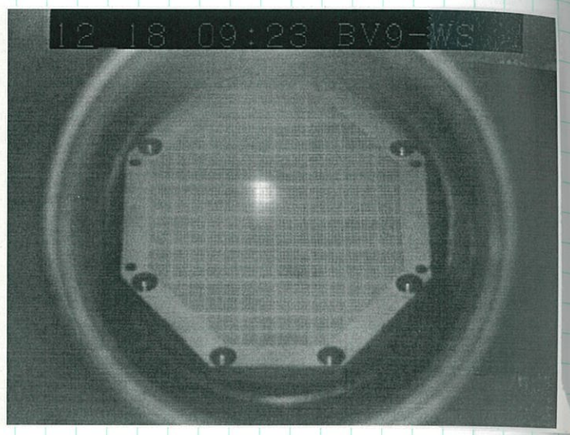
Ch#	Name	Scaler UP	Scaler DOWN
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	211,177	215,653
2	GR Trigger Live	162,842	165,281
3	GR Clock	443,024	452,997
4	GR Clock Live	372,784	378,482
5	Broken Channel	0	0
6	LAS Trigger Live	0	0
7	LAS Clock	443,024	452,997
8	LAS Clock Live	373,407	379,112
9	GR Singles Event	162,842	165,281
10	LAS Singles Event	0	0
11	GR-LAS Coincidence	0	0
12	LAS Singles Sampling	0	0
13	LAS Trigger	0	0
14	GR Singles Sampling	162,842	165,281
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0

9:10

実験室入室

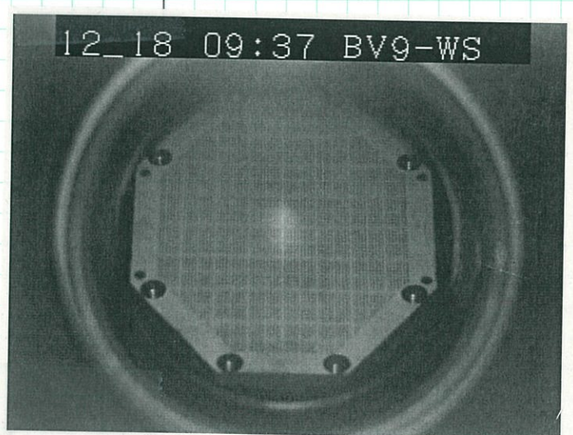
カナコの前の扉にとどまる

12/18 9:25



GR D1. D2 の Feed back はもかっておいた方が
解析等が楽 → Feed back 解除.

実験室入室　　軸出しする



8:45　実験室入室
=3

10:43

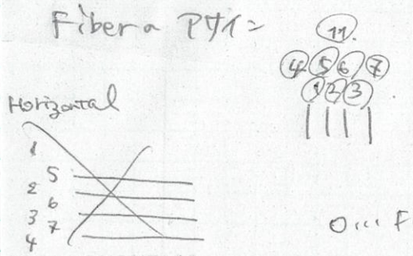
LADDER2 マウント
HV上げずにノイズレベル見る

	Shaper			
CH0	~~±3mV~~	±6mV	CH15	±6mV　Tail
CH1	±6mV		CH16	±3mV
CH2	±6mV		CH17	±6mV
CH3	±5mV		CH18	±5mV
CH4	±7mV		CH19	±7mV
CH5	±6mV		CH20	±7mV
CH6	±3mV		CH21	±5mV
CH7	±3mV	(Tail)	CH22	±3mV
CH8	±4mV		CH23	±3mV
CH9	±3mV			
CH10	±4mV			
CH11	±7mV			
CH12	±6mV			
CH13	±7mV			
CH14	±7mV			

11:55　実験室出る

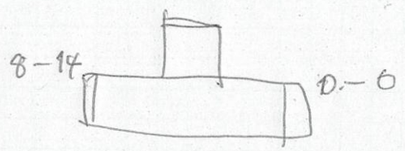
LADDER 2

Fiberのアサイン

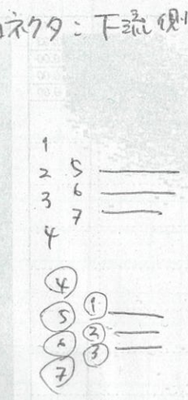


0… Fiberあり
なし… CH

上流から



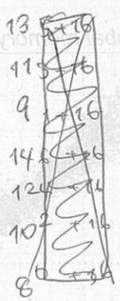
全て
コネクタ：下流側にある.



と fiberにかいてあるが

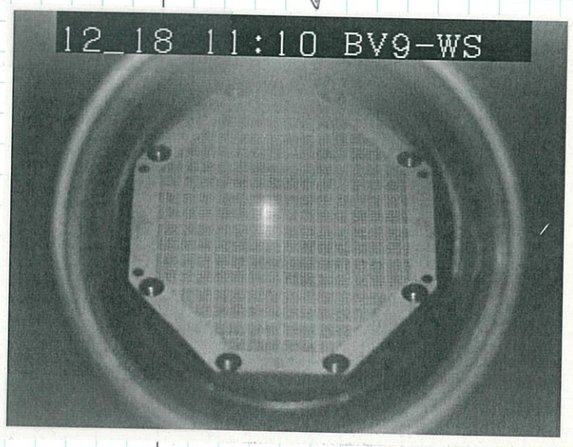
と逆さになおす。

fiber#	右	左
H1	1	13
H2	3	11
H3	5	9
H4	0	14
H5	2	12
H6	4	10
H7	6	8



V1	23
V2	20
V3	16
V4	~~22~~
V5	~~21~~
V6	18
V7	17
V11	19

BV9で、ビームが
9ころの状態から
ずれている

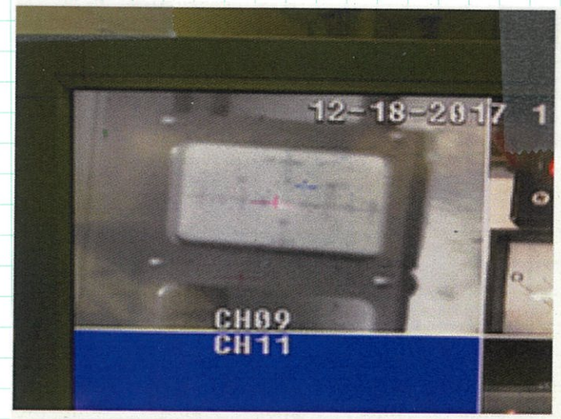


このViewer↑はちゃんと
アライメントされていない Ladder の穴がBに合わせただけ

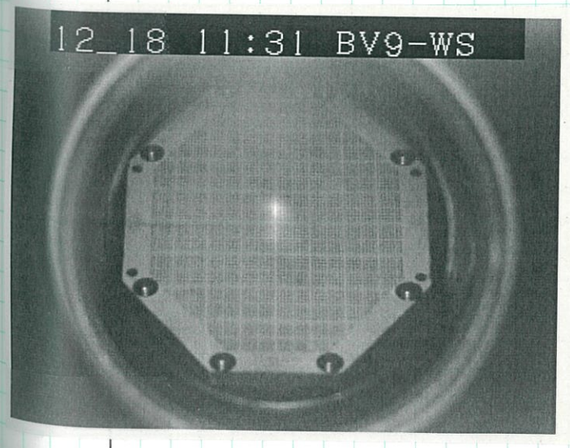
2
Ladderの下の方の穴が ← viewerを合わせた穴

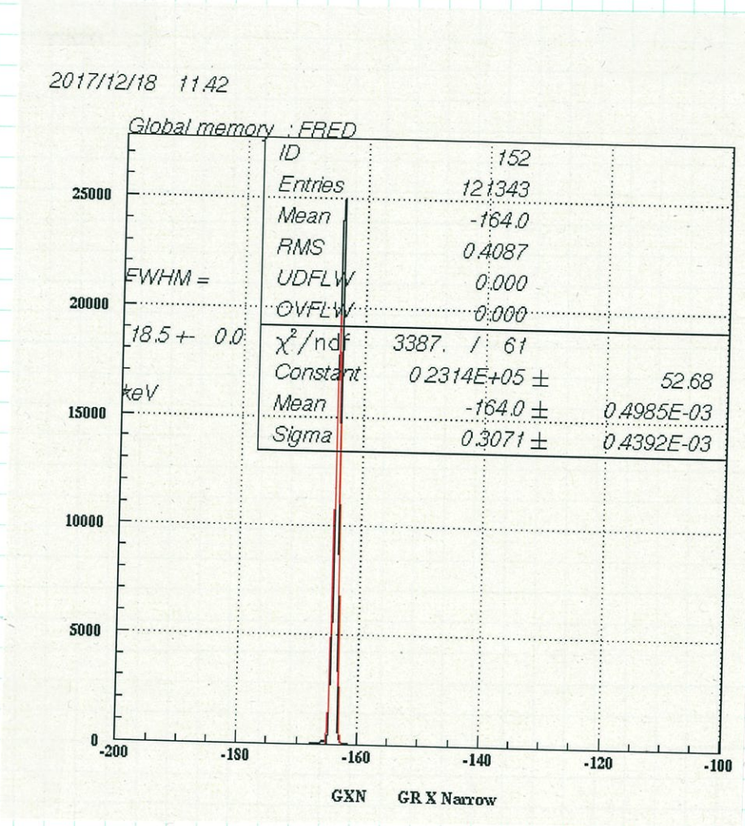
はビームラインには
合っていない穴がBだった。

アラインしたこと



11:30ごろ 「BV9の真ん中 - TGTのカメラで見て2mm左」で
After tuning 軸をとってもらう





E492 run sheet signature: Sakuma

Run#: 6070 Title: ladder2, after beam centering. beam through GR 0°

Start time: 11:38:20 Stop time: 11:43:23 Target: Blank

GR angle: 0° Temp Ladder:____ [°C] room:____[°C] HV: ____[V]

ER trigger: self / LED DAC: ____ Shaping Time: (HG)____[ns] (LG)____[ns]

D1: 889.921 [mT] D2: 889.929 [mT] Live: GR:____[%] LAS:____[%]

GR single(7): 3k [Hz] LAS single(10):____[Hz] COIN(11):____[Hz]

Comment:

ladder2 LED calibration

昨日の経過 (91-92p) あたりからスタートする。

LED 2.3 V. DAC フォルダ DACBACKup/ladder2.yml

Calib 2026.

ch	gain [ch]			Pedestal [ch]
0	21.16			760.9
1	22.11			767.6
2	19.12	DAC430		768.4
3	15.94	→	20.43	768.3
4	20.52			763.8
5	24.74			754.7
6	19.56			758.8
8	21.64			764.4
9	18.7			754.0
10	18.1			769.9
11	20.48			761.6
12	21.33			764.2
13	19.63			766.0
14	19.42			762.6
16	19.02			763.1
17	20.92			760.9
18	22.45			766.0
19	17.41	DAC430 →	22.28	761.4
20	22.02			756.5
21	16.63	DAC420 →	21.62	766.1
22	18.6			762.5
23	22.54			757.4

DAC 410 → 430 に変更。
LED 2.3V → 2.2V.
Calib 2027.

21chのDAC 420に変更。, LED. 2.2V.
calib 2028

この場合のcalibは. blank位置、2.2V, 2.3Vでやればよい。

E492 run sheet signature: Tsumura GR0°

Run#: 6071 Title: ladder2, after beam centering, beam through

Start time: 12:31:35 Stop time: 12:34:07 Target: Blank

GR angle: 0° Temp Ladder:____ [°C] room:____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 760 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.922 [mT] D2: 889.928 [mT] Live: GR:____ [%] LAS:____ [%]

GR single(7): 2k [Hz] LAS single(10):____ [Hz] COIN(11):____ [Hz]

Comment: まちがって EASIROCのデータとってしまった。
適当にセンターに当てている。

Ratemeters

Run:	6071 (RUNNING)
Comment:	ladder2, after beam centering, beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 12:32:37
To:	2017/12/18 12:32:38
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	88.3 %
LAS Live:	91.4 %
Clock Live:	92.6 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	1,843.2	Infinite	→
2	GR Trigger Live	1,627.6	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,263.7	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	95.4	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,270.7	Infinite	→
9	GR Singles Event	1,627.6	Infinite	→
10	LAS Singles Event	95.4	Infinite	→
11	GR-LAS Coincidence	0.0	NaN	→
12	LAS Singles Sampling	95.4	Infinite	→
13	LAS Trigger	104.3	Infinite	→
14	GR Singles Sampling	1,627.6	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→

Scalers

Run:	6071 (STOPPED)
Comment:	ladder2, after beam centering, beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 12:31:35
To:	2017/12/18 12:34:07
Duration:	152.0 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler SPIN	Scaler UP	Scaler DOWN
		BLP1	OUT	OUT
		BLP2	OUT	OUT
0	Beam Intensity	0	0	
1	GR Trigger	139,423	140,872	
2	GR Trigger Live	121,397	122,728	
3	GR Clock	755,085	765,124	
4	GR Clock Live	699,533	708,575	
5	Broken Channel	0	0	
6	LAS Trigger Live	8,122	8,174	
7	LAS Clock	755,085	765,124	
8	LAS Clock Live	700,002	709,071	
9	GR Singles Event	121,395	122,724	
10	LAS Singles Event	8,120	8,170	
11	GR-LAS Coincidence	2	4	
12	LAS Singles Sampling	8,120	8,170	
13	LAS Trigger	8,732	8,755	
14	GR Singles Sampling	121,395	122,724	
15	GR Trigger (500nsec)	0	0	

E492 run sheet signature: Tsumura

Run#: 6072 Title: Position search for ladder2 GR 0deg VDCC

Start time: 12:46:49 Stop time: ~~12:48~~ 13:01:06 Target: moving (ladder2)

GR angle: 0° Temp Ladder:____ [°C] room:____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.921 [mT] D2: 889.928 [mT] Live: GR:____ [%] LAS:____ [%]

GR single(7):____ [Hz] LAS single(10):____ [Hz] COIN(11):____ [Hz]

Comment:

E492 run sheet signature: Nanamura

Run#: 6073 Title: Position search for ladder2

Start time: 13:01:59 Stop time: 13:15:48 Target: moving (ladder2)

GR angle: 0° Temp Ladder:____ [°C] room:____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.922 [mT] D2: 889.929 [mT] Live: GR:____ [%] LAS:____ [%]

GR single(7):____ [Hz] LAS single(10):____ [Hz] COIN(11):____ [Hz]

Comment: VDC ~~was~~ tripped.
~~gr~~ .gr file and .gv file was missing! → Junk

E492 run sheet signature: Nanamura

Run#: 6074 Title: Position search for ladder2 GR0deg, ~

Start time: 13:16:46 Stop time: 13:21:22 Target: moving

GR angle: 0° Temp Ladder:____ [°C] room:____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.925 [mT] D2: 889.925 [mT] Live: GR:____ [%] LAS:____ [%]

GR single(7):____ [Hz] LAS single(10):____ [Hz] COIN(11):____ [Hz]

Comment:

E492 run sheet signature: Nanamura

Run#: 6075 Title: Position search for ladder2 GRodeg~

Start time: 13:21:53 Stop time: 13:51:11 Target: moving

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.920 [mT] D2: 889.928 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

E492 run sheet signature: Nanamura.

Run#: 6076 Title: ladder2 center

Start time: 13:53:30 Stop time: 13:56:56 Target: ladder2 center.

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.920 [mT] D2: 889.928 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

E492 run sheet signature: Nanamura

Run#: 6077 Title: ladder2 center

Start time: 14:00:01 Stop time: 14:08:37 Target: ladder2.

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.920 [mT] D2: 889.927 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

E492 run sheet signature: Nanamura

Run#: 6078 Title: ladder2 1.174V position

Start time: 14:15:02 Stop time: 14:40:35 Target: ladder2

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: ____ [mT] D2: ____ [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

[5203] Default register value.ymlで、
0,2,4,6,8,10,12,14 以外のDiscriがマスク立れていた。
4チのファイバーしかないところで efficiencyが低かったのは
このせい。(4チファイバーは16以降だった)
これを修正。

E492 run sheet signature: Nanamura

Run#: 6079 Title: ladder2 pos search (GRodeg~).

Start time: 15:03:57 Stop time: 15:08:27 Target: moving

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV: 57 [V]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) ____ [ns] (LG) ____ [ns]

D1: 889.925 [mT] D2: 889.925 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

E492 run sheet signature: Nanamura

Run#: 6080 Title: ladder2 pos search

Start time: 15:09:05 Stop time: 15:13:22 Target: moving

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV:57V

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.920 [mT] D2: 889.928 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

E492 run sheet signature: Nanamura

Run#: 6081 Title: ladder2 pos search.

Start time: 15:14:30 Stop time: 15:18:44 Target: moving

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV:57V

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.920 [mT] D2: 889.927 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

E492 run sheet signature: Nanamura

Run#: 6082 Title: ladder2 pos search

Start time: 15:19:00 Stop time: 15:22:39 Target: moving

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV:57V

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.919 [mT] D2: 889.928 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

E492 run sheet signature: Nanamura

Run#: 6083 Title: ladder2 pos search GR0deg.

Start time: 15:23:24 Stop time: 15:27:24 Target: moving

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV:57

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.920 [mT] D2: 889.927 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment:

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LED 2.2V

2.3V

calib 2029

calib 2030 → slow control忘れ もう1回

LED 2.2V

calib 2031

Ratemeters

Run:	6084 (RUNNING)
Comment:	ladder2, beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 15:38:07
To:	2017/12/18 15:38:08
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	85.5 %
LAS Live:	NaN %
Clock Live:	92.8 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	1,979.3	Infinite	→
2	GR Trigger Live	1,693.2	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,275.6	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	0.0	NaN	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,281.6	Infinite	→
9	GR Singles Event	1,693.2	Infinite	→
10	LAS Singles Event	0.0	NaN	→
11	GR-LAS Coincidence	0.0	NaN	→
12	LAS Singles Sampling	0.0	NaN	→
13	LAS Trigger	0.0	NaN	→
14	GR Singles Sampling	1,693.2	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→
20	BLP1 Left Chance	0.0	NaN	→
21	BLP1 Right Chance	0.0	NaN	→

Scalers

Run:	6084 (STOPPED)
Comment:	ladder2, beam through, GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 15:38:00
To:	2017/12/18 15:40:57
Duration:	177.2 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler SPIN	Scaler
		UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	172,126	172,076
2	GR Trigger Live	148,832	149,188
3	GR Clock	885,938	885,954
4	GR Clock Live	822,124	821,779
5	Broken Channel	0	0
6	LAS Trigger Live	0	0
7	LAS Clock	885,938	885,954
8	LAS Clock Live	822,690	822,348
9	GR Singles Event	148,832	149,188
10	LAS Singles Event	0	0
11	GR-LAS Coincidence	0	0
12	LAS Singles Sampling	0	0
13	LAS Trigger	0	0
14	GR Singles Sampling	148,832	149,188
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0
20	BLP1 Left Chance	0	0

E492 run sheet signature: Nanamura

Run#: 6084 Title: ladder2, beamthrough, GRodeg,

Start time: 15:38:00 Stop time: 15:40:57 Target: blank

GR angle: 0° Temp Ladder: _____ [°C] room: _____ [°C]

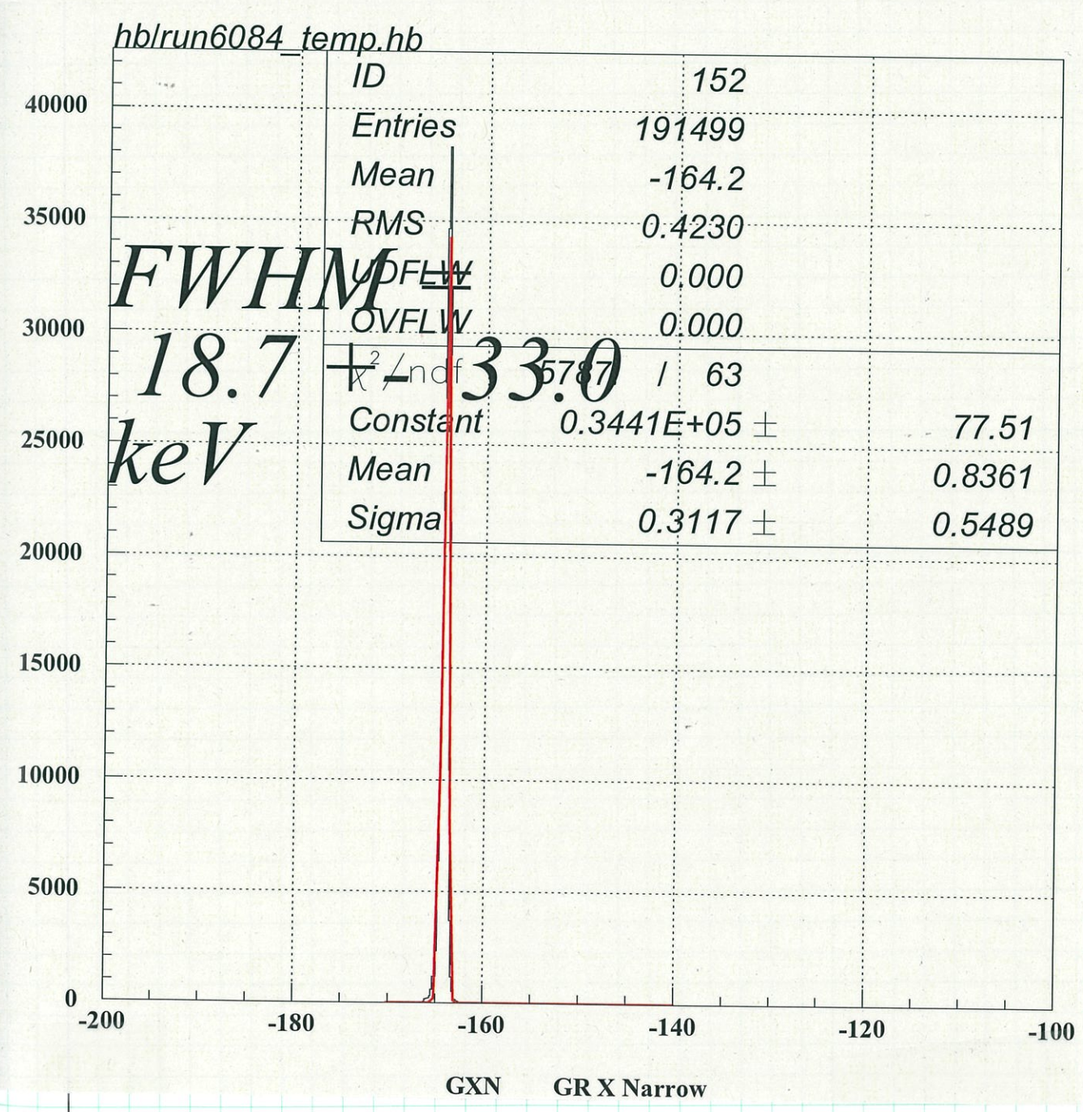
ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.919 [mT] D2: 889.928 [mT] Live: GR: _____ [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment:

2017/12/18 15.44



E492 run sheet signature: Nanamura

Run#: 6085 Title: ladder2 pos1.277V (first).

Start time: 15:48:40 Stop time: _____ Target: _____

GR angle: _____ Temp Ladder: _____ [°C] room: _____ [°C]

ER trigger: self / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: _____ [mT] D2: _____ [mT] Live: GR: _____ [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: トリガー条件 and のまま → Junk!

Ratemeters

Run:	6085 (RUNNING)
Comment:	ladder2 pos 1.277V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 15:47:55
To:	2017/12/18 15:47:56
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	80.3 %
LAS Live:	93.7 %
Clock Live:	85.7 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	1,842.3	Infinite	→
2	GR Trigger Live	1,478.8	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	8,570.9	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	1,874.1	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	8,580.8	Infinite	→
9	GR Singles Event	1,476.8	Infinite	→
10	LAS Singles Event	1,872.1	Infinite	→
11	GR-LAS Coincidence	2.0	Infinite	→
12	LAS Singles Sampling	1,872.1	Infinite	→
13	LAS Trigger	2,000.2	Infinite	→
14	GR Singles Sampling	1,476.8	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→

Scalers

Run:	6085 (STOPPED)
Comment:	ladder2 pos 1.277V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 15:46:40
To:	2017/12/18 15:48:47
Duration:	126.9 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	112,700	111,647
2	GR Trigger Live	93,467	92,347
3	GR Clock	634,348	634,358
4	GR Clock Live	559,181	559,241
5	Broken Channel	0	0
6	LAS Trigger Live	108,752	109,087
7	LAS Clock	634,346	634,358
8	LAS Clock Live	559,659	559,716
9	GR Singles Event	66,465	65,086
10	LAS Singles Event	81,734	81,807
11	GR-LAS Coincidence	27,002	27,261
12	LAS Singles Sampling	81,734	81,807
13	LAS Trigger	122,100	122,754
14	GR Singles Sampling	66,465	65,086
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0

E492 run sheet signature: Nanamura

Run#: 6086 Title: ladder2pos 1.277V (first fiber).

Start time: 15:49:05 Stop time: 15:49:54 Target: ladder2.

GR angle: 0° Temp Ladder: _____ [°C] room: _____ [°C] HV 57V.

ER trigger: self / LED DAC: 900 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: _____ [mT] D2: _____ [mT] Live: GR: _____ [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: _____

Scalers

Run:	6086 (STOPPED)
Comment:	ladder2 pos 1.277V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 15:49:05
To:	2017/12/18 15:50:08
Duration:	63.4 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	57,837	56,233
2	GR Trigger Live	49,219	47,863
3	GR Clock	322,202	312,115
4	GR Clock Live	292,675	283,230
5	Broken Channel	0	0
6	LAS Trigger Live	69,070	66,902
7	LAS Clock	322,202	312,115
8	LAS Clock Live	292,813	283,356
9	GR Singles Event	114	131
10	LAS Singles Event	19,961	19,168
11	GR-LAS Coincidence	49,105	47,732
12	LAS Singles Sampling	19,961	19,168
13	LAS Trigger	77,003	74,686
14	GR Singles Sampling	114	131
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0
20	BLP1 Left Chance	0	0
21	BLP1 Right Chance	0	0

E492 run sheet signature: Nanamura

Run#: 6087. Title: ladder2 pos 1.315 V (2nd fiber)

Start time: 15:51:37 Stop time: 15:52:29. Target: ladder2.

GR angle: 0° Temp Ladder:____ [°C] room:____[°C]

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.919 [mT] D2: 889.927 [mT] Live: GR:____[%] LAS:____[%]

GR single(7):____[Hz] LAS single(10):____[Hz] COIN(11):____[Hz]

Comment:

Ratemeters

Run:	6087 (RUNNING)
Comment:	ladder2 pos 1.315V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 15:51:39
To:	2017/12/18 15:51:40
Duration:	1.0 sec
Spin:	DOWN
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	85.4 %
LAS Live:	91.3 %
Clock Live:	90.8 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	1,760.9	Infinite	→
2	GR Trigger Live	1,520.7	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,084.2	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	2,143.4	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,087.2	Infinite	→
9	GR Singles Event	6.0	Infinite	→
10	LAS Singles Event	628.7	Infinite	→
11	GR-LAS Coincidence	1,514.7	Infinite	→
12	LAS Singles Sampling	628.7	Infinite	→
13	LAS Trigger	2,348.0	Infinite	→
14	GR Singles Sampling	6.0	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→

Scalers

Run:	6087 (STOPPED)
Comment:	ladder2 pos 1.315V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 15:51:37
To:	2017/12/18 15:52:29
Duration:	52.3 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler SPIN UP	Scaler DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	48,151	48,230
2	GR Trigger Live	40,764	40,925
3	GR Clock	261,767	261,704
4	GR Clock Live	237,278	237,394
5	Broken Channel	0	0
6	LAS Trigger Live	56,756	56,836
7	LAS Clock	261,767	261,704
8	LAS Clock Live	237,388	237,499
9	GR Singles Event	113	105
10	LAS Singles Event	16,103	16,014
11	GR-LAS Coincidence	40,651	40,820
12	LAS Singles Sampling	16,103	16,014
13	LAS Trigger	63,089	62,968
14	GR Singles Sampling	113	105
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0

E492 run sheet signature: Nanamura

Run#: 6088. Title: ladder2 pos 1.352 V

Start time: 15:54:00 Stop time: 15:54:55 Target: ladder2.

GR angle: 0° Temp Ladder:____ [°C] room:____[°C] HV57V

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.920 [mT] D2: 889.928 [mT] Live: GR:____[%] LAS:____[%]

GR single(7):____[Hz] LAS single(10):____[Hz] COIN(11):____[Hz]

Comment:

Ratemeters

Run:	6088 (RUNNING)
Comment:	ladder2 pos 1.352V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 15:54:03
To:	2017/12/18 15:54:04
Duration:	1.0 sec
Spin:	UP
BLP1:	OUT
BLP2:	OUT
BI Range:	6.00 nA
Beam Current:	0.00 nA
GR Live:	85.2 %
LAS Live:	91.1 %
Clock Live:	90.7 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	1,842.3	Infinite	→
2	GR Trigger Live	1,569.2	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,074.4	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	2,166.1	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,078.4	Infinite	→
9	GR Singles Event	4.0	Infinite	→
10	LAS Singles Event	600.9	Infinite	→
11	GR-LAS Coincidence	1,565.2	Infinite	→
12	LAS Singles Sampling	600.9	Infinite	→
13	LAS Trigger	2,376.6	Infinite	→
14	GR Singles Sampling	4.0	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→
18	BLP1 Up	0.0	NaN	→
19	BLP1 Down	0.0	NaN	→

Scalers

Run:	6088 (STOPPED)
Comment:	ladder2 pos 1.352V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From:	2017/12/18 15:54:00
To:	2017/12/18 15:54:55
Duration:	55.4 sec
BI Range:	6.00 nA
Beam Charge:	.00 nC

Ch#	Name	Scaler SPIN UP	Scaler DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	49,492	51,564
2	GR Trigger Live	42,077	43,767
3	GR Clock	271,861	281,948
4	GR Clock Live	246,598	255,735
5	Broken Channel	0	0
6	LAS Trigger Live	58,611	60,724
7	LAS Clock	271,861	281,948
8	LAS Clock Live	246,714	255,848
9	GR Singles Event	134	112
10	LAS Singles Event	16,863	17,068
11	GR-LAS Coincidence	41,943	43,655
12	LAS Singles Sampling	16,863	17,068
13	LAS Trigger	65,265	67,572
14	GR Singles Sampling	134	112
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0

E492 run sheet signature: Nanamura

Run#: 6089 Title: ladder2 pos 1.390 V (center)

Start time: 15:56:16 Stop time: 15:58:33 Target: ladder2

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C] HV 57V

ER trigger: (self) / LED DAC: 900 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.920 [mT] D2: 889.928 [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: ____

W

Ratemeters

Run: 6089 (RUNNING)
Comment: ladder2 pos 1.390V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 15:56:19
To: 2017/12/18 15:56:20
Duration: 1.0 sec
Spin: DOWN
BLP1: OUT
BLP2: OUT
BI Range: 6.00 nA
Beam Current: 0.00 nA
GR Live: 85.1 %
LAS Live: 91.5 %
Clock Live: 91.0 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	1,765.6	Infinite	→
2	GR Trigger Live	1,502.5	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,097.3	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	2,108.2	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,101.3	Infinite	→
9	GR Singles Event	6.0	Infinite	→
10	LAS Singles Event	611.7	Infinite	→
11	GR-LAS Coincidence	1,496.5	Infinite	→
12	LAS Singles Sampling	611.7	Infinite	→
13	LAS Trigger	2,303.9	Infinite	→
14	GR Singles Sampling	6.0	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→
17	BLP1 Right	0.0	NaN	→

Scalers

Run: 6089 (STOPPED)
Comment: ladder2 pos 1.390V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 15:56:16
To: 2017/12/18 15:58:33
Duration: 136.9 sec
BI Range: 6.00 nA
Beam Charge: .00 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	125,814	125,809
2	GR Trigger Live	106,696	106,799
3	GR Clock	684,565	684,784
4	GR Clock Live	621,179	620,717
5	Broken Channel	0	0
6	LAS Trigger Live	146,853	148,329
7	LAS Clock	684,565	684,784
8	LAS Clock Live	621,464	620,993
9	GR Singles Event	1,160	342
10	LAS Singles Event	41,303	41,849
11	GR-LAS Coincidence	105,538	106,457
12	LAS Singles Sampling	41,303	41,849
13	LAS Trigger	167,134	168,707
14	GR Singles Sampling	1,160	342
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0
18	BLP1 Up	0	0
19	BLP1 Down	0	0

E492 run sheet signature: Nanamura

Run#: 6090 Title: ladder2 pos 1.428 V (5th).

Start time: 15:59:51 Stop time: 16:00:46 Target: ladder2

GR angle: 0° Temp Ladder: ____ [°C] room: ____ [°C]

ER trigger: (self) / LED DAC: 900 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: ____ [mT] D2: ____ [mT] Live: GR: ____ [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: ____

Scalers

Run: 6090 (STOPPED)
Comment: ladder2 pos 1.428V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 15:59:51
To: 2017/12/18 16:00:46
Duration: 55.4 sec
BI Range: 6.00 nA
Beam Charge: .00 nC

Ch#	Name	Scaler	Scaler
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	50,382	51,973
2	GR Trigger Live	42,431	43,886
3	GR Clock	271,837	281,852
4	GR Clock Live	244,756	254,250
5	Broken Channel	0	0
6	LAS Trigger Live	62,803	64,300
7	LAS Clock	271,837	281,852
8	LAS Clock Live	244,882	254,366
9	GR Singles Event	109	109
10	LAS Singles Event	20,480	20,521
11	GR-LAS Coincidence	42,322	43,777
12	LAS Singles Sampling	20,480	20,521
13	LAS Trigger	70,213	71,945
14	GR Singles Sampling	109	109
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0

E492 run sheet signature: Nanamura

Run#: 6091 Title: ladder2 pos 1.465V (6th)

Start time: 16:01:56 Stop time: 16:03:02 Target: ladder2

GR angle: 0° Temp Ladder:_____ [°C] room:_____[°C] HV 57V

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.919 [mT] D2: 889.926 [mT] Live: GR:_____[%] LAS:_____[%]

GR single(7):_____[Hz] LAS single(10):_____[Hz] COIN(11):_____[Hz]

Comment:_____

V

Scalers

Run: 6091 (STOPPED)
Comment: ladder2 pos 1.465V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 16:01:56
To: 2017/12/18 16:03:02
Duration: 66.4 sec
BI Range: 6.00 nA
Beam Charge: .00 nC

Ch#	Name	Scaler UP	Scaler DOWN
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	61,675	61,652
2	GR Trigger Live	51,468	51,375
3	GR Clock	332,151	332,228
4	GR Clock Live	296,448	296,014
5	Broken Channel	0	0
6	LAS Trigger Live	83,570	83,929
7	LAS Clock	332,151	332,228
8	LAS Clock Live	296,607	296,178
9	GR Singles Event	121	135
10	LAS Singles Event	32,215	32,680
11	GR-LAS Coincidence	51,347	51,240
12	LAS Singles Sampling	32,215	32,680
13	LAS Trigger	94,618	95,032
14	GR Singles Sampling	121	135
15	GR Trigger (500nsec)	0	0
16	BLP1 Left	0	0
17	BLP1 Right	0	0

V

Ratemeters

Run: 6091 (RUNNING)
Comment: ladder2 pos 1.465V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 16:02:33
To: 2017/12/18 16:02:34
Duration: 1.0 sec
Spin: UP
BLP1: OUT
BLP2: OUT
BI Range: 6.00 nA
Beam Current: 0.00 nA
GR Live: 82.6 %
LAS Live: 84.8 %
Clock Live: 89.9 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	1,827.6	Infinite	→
2	GR Trigger Live	1,509.7	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	8,988.9	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	2,366.9	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	8,994.8	Infinite	→
9	GR Singles Event	0.0	NaN	→
10	LAS Singles Event	857.2	Infinite	→
11	GR-LAS Coincidence	1,509.7	Infinite	→
12	LAS Singles Sampling	857.2	Infinite	→
13	LAS Trigger	2,790.0	Infinite	→
14	GR Singles Sampling	0.0	NaN	→
15	GR Trigger (500nsec)	0.0	NaN	→
16	BLP1 Left	0.0	NaN	→

E492 run sheet signature: Nanamura

Run#: 6092 Title: ladder2 pos 1.502V (7th, final)

Start time: 16:04:41 Stop time: 16:05:46 Target: ladder2

GR angle: 0° Temp Ladder:_____ [°C] room:_____[°C] HV:57V

ER trigger: self / LED DAC: 700 Shaping Time: (HG) 25 [ns] (LG) 25 [ns]

D1: 889.919 [mT] D2: 889.927 [mT] Live: GR:_____[%] LAS:_____[%]

GR single(7):_____[Hz] LAS single(10):_____[Hz] COIN(11):_____[Hz]

Comment:_____

WS

Ratemeters

Run: 6092 (RUNNING)
Comment: ladder2 pos 1.502V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 16:05:36
To: 2017/12/18 16:05:37
Duration: 1.0 sec
Spin: UP
BLP1: OUT
BLP2: OUT
BI Range: 6.00 nA
Beam Current: 0.00 nA
GR Live: 84.8 %
LAS Live: 86.3 %
Clock Live: 90.7 %

Ch#	Name	Hz	Hz/nA	Trend
0	Beam Intensity	0.0	NaN	→
1	GR Trigger	1,863.0	Infinite	→
2	GR Trigger Live	1,579.9	Infinite	→
3	GR Clock	10,000.0	Infinite	→
4	GR Clock Live	9,067.5	Infinite	→
5	Broken Channel	0.0	NaN	→
6	LAS Trigger Live	2,183.7	Infinite	→
7	LAS Clock	10,000.0	Infinite	→
8	LAS Clock Live	9,071.5	Infinite	→
9	GR Singles Event	2.0	Infinite	→
10	LAS Singles Event	604.8	Infinite	→
11	GR-LAS Coincidence	1,578.0	Infinite	→
12	LAS Singles Sampling	604.8	Infinite	→
13	LAS Trigger	2,531.3	Infinite	→
14	GR Singles Sampling	2.0	Infinite	→
15	GR Trigger (500nsec)	0.0	NaN	→

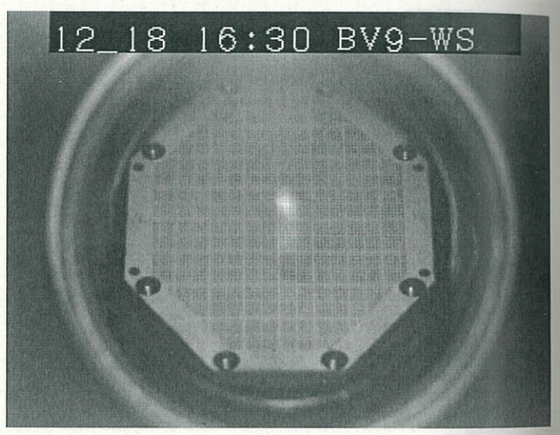
W

Scalers

Run: 6092 (STOPPED)
Comment: ladder2 pos 1.502V GR 0 deg, VDC C5.7 kV, P 0.3 kV, dispersive mode
From: 2017/12/18 16:04:41
To: 2017/12/18 16:05:46
Duration: 65.4 sec
BI Range: 6.00 nA
Beam Charge: .00 nC

Ch#	Name	Scaler UP	Scaler DOWN
	SPIN	UP	DOWN
	BLP1	OUT	OUT
	BLP2	OUT	OUT
0	Beam Intensity	0	0
1	GR Trigger	61,869	64,166
2	GR Trigger Live	52,234	54,234
3	GR Clock	322,127	332,287
4	GR Clock Live	291,393	300,382
5	Broken Channel	0	0
6	LAS Trigger Live	71,093	74,081
7	LAS Clock	322,127	332,287
8	LAS Clock Live	291,532	300,521
9	GR Singles Event	523	144
10	LAS Singles Event	19,377	19,985
11	GR-LAS Coincidence	51,711	54,090
12	LAS Singles Sampling	19,377	19,985
13	LAS Trigger	79,905	83,258
14	GR Singles Sampling	523	144
15	GR Trigger (500nsec)	0	0

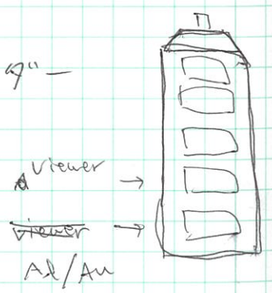
ラダー2の測定終了.



16:44　実験室入室

16:56　・ラダー　LADDER2 → 標準ラダー

・真空引き開始



17:13　GR　0° → 4.5°

扉上 GV 開

Q1FCのカメラを設置

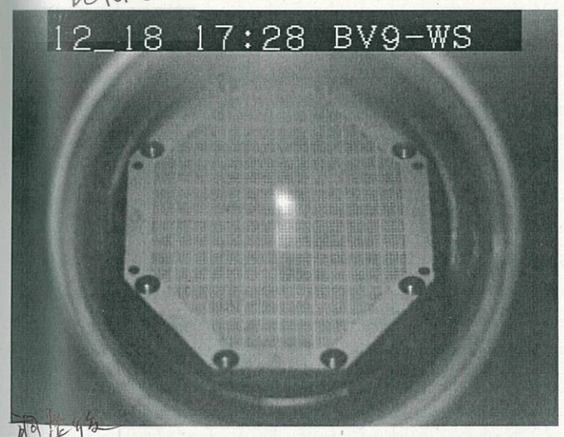
Q1FC　0° → 4.5°

17:17　実験室退室

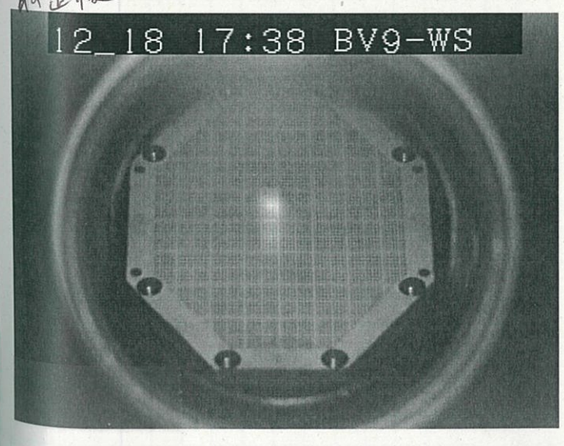
17:25　標的　Au → Viewer

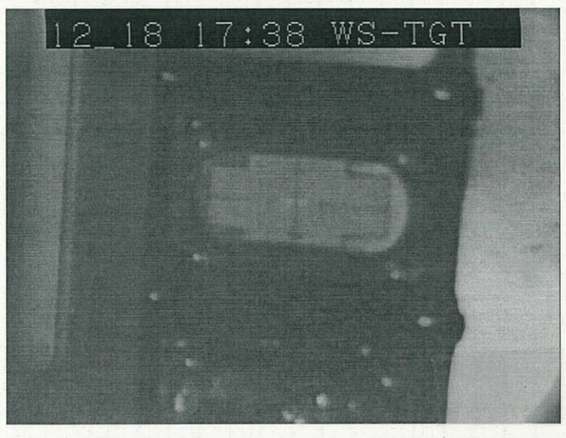
17:37　ビーム軸出し完了.

before



調整後





標的 viewer → Au

E492 run sheet signature: Ami

Run#: 6093 Title: Au, slit: blank, GR 4.5°

Start time: 17:41:41 Stop time: _____ Target: Au

GR angle: 4.5° Temp Ladder: _____ [°C] room: _____ [°C]

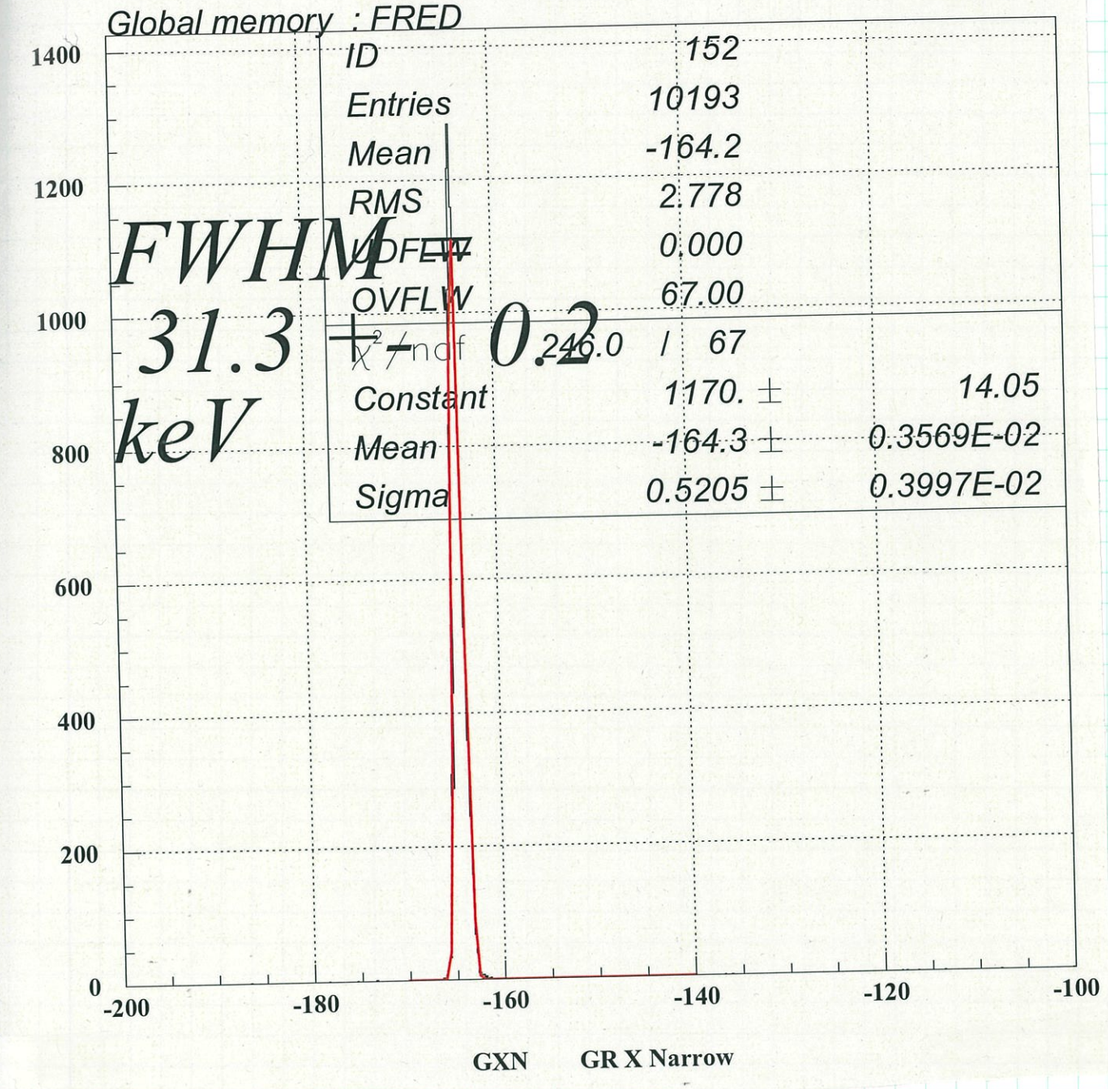
ER trigger: self / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: _____ [mT] D2: _____ [mT] Live: GR: 92.8 [%] LAS: _____ [%]

GR single(7): 1.5k [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: 分解能は昨日(12/17)の調整時と同程度

2017/12/18 17.44



slit を blank → sieve slit に変更.

磁場を振って較正データをとる.

E492 run sheet signature: Ami

Run#: 6094 Title: Au, sieve slit, D1Fx 100%

Start time: 17:46:26 Stop time: 17:49:48 Target: Au

GR angle: 4.5° Temp Ladder: ____ [°C] room: ____ [°C]

ER trigger: ~~self~~ / LED DAC: ____ Shaping Time: (HG)____[ns] (LG)____[ns]

D1: ____[mT] D2: ____[mT] Live: GR: ____[%] LAS: ____[%]

GR single(7): ____[Hz] LAS single(10): ____[Hz] COIN(11): ____[Hz]

Comment: ____

~~time servier~~ → time server ~~ﾀｲﾑｻｰﾊﾞｰ?~~

17:46 ・VACがトリップしてた

17:55 ビーム 落ちる

17:59 復旧.

~~#7~~

18:03 GR D1, D2の磁場 100% → 98.5%

WS Magnets: Mon Dec 18 18:00:58 JST 2017 run6094

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	97.100	97.200	A				
GR SX	18.786	18.700	A				
GR Q2	8.774	8.767	A				
GR D1		235.795	A	889.925	889.920	mT	---
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2	457.395	443.692	A	889.925	889.923	mT	---
GR DSR		0.054	A		Error	mT	
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments

Run 6094: Stopped

File Option Hcopy Queue '17/12/18 16:01

Reaction

197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
Angle (lab.) / Energy	0	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			800.378	MeV/c
Rho			300	cm
Raito			100	%
Rho (DSR)			0 / + / -	
Q1	0	%	97.100	A
SX			18.786	A
Q2			8.774	A
D1	889.925	mT	236.720	A
D2	889.925	mT	444.073	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

E492 run sheet signature: Ami

Run#: 6095 Title: Au, sieve slit, D1 @2 98.5%

Start time: 18:06:12 Stop time: 18:13:15 Target: Au

GR angle: 4.5° Temp Ladder: _____ [°C] room: _____ [°C]

ER trigger: self / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: 876.575 [mT] D2: 876.580 [mT] Live: GR: 94 [%] LAS: _____ [%]

GR single(7): 1.2 k [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment:

File Option Hcopy Queue '17/12/18 18:06

Reaction

197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
Angle (lab.) / Energy	0	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			800.378	MeV/c
Rho			300	cm
Raito			98.5	%
Rho (DSR)		0	+	-
Q1	0	%	95.643	A
SX			18.505	A
Q2			8.642	A
D1	876.576	mT	233.169	A
D2	876.576	mT	437.412	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

WS Magnets: Mon Dec 18 18:06:35 JST 2017 Run 6095

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	95.643	95.700	A				
GR SX	18.505	18.400	A				
GR Q2	8.642	8.634	A				
GR D1		232.037	A	876.576	876.575	mT	---
GR MQ		0.000	A				
GR MS		0.476	A				
GR D2	457.395	436.650	A	876.576	876.580	mT	---
GR DSR		0.054	A		Error	mT	
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments

Run 6094: Stopped

Messages

```
2017/12/18 18:06:33 Opening a stream to nmrred.rcnp.osaka-u.ac.jp/192.168.2.202:10001
2017/12/18 18:06:33 Closing the stream to nmrbrown.rcnp.osaka-u.ac.jp/192.168.2.201:1
2017/12/18 18:06:33 Opening tag: GR.DSR.NMR
2017/12/18 18:06:33 Retry to open a stream to nmrorange.rcnp.osaka-u.ac.jp/192.168.2.
2017/12/18 18:06:33 Closing the stream to nmrred.rcnp.osaka-u.ac.jp/192.168.2.202:100
```

Update 10.0 sec | Save... | Load... | Page Setup... | Print... | Close

統計が少ないのでビーム強度を上げてもらう. 5nA

E492 run sheet signature: Ami

Run#: 6096 Title: Au, Sieve Slit, D1 D2 98.5% BI-5nA

Start time: 18:20:50 Stop time: _____ Target: Au

GR angle: 45° Temp Ladder: _____ [°C] room: _____ [°C]

ER trigger: ~~self~~ / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: 876.575 [mT] D2: 876.588 [mT] Live: GR: _____ [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: _____

18:25 ビーム落ちた

30 復旧

E492 run sheet signature: Ami

Run#: 6097 Title: Au, sieve slit, D1 D2 98.5 % BI 5nA

Start time: 18:30 Stop time: _____ Target: Au

GR angle: 45° Temp Ladder: _____ [°C] room: _____ [°C]

ER trigger: ~~self~~ / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: G [mT] D2: _____ [mT] Live: GR: _____ [%] LAS: _____ [%]

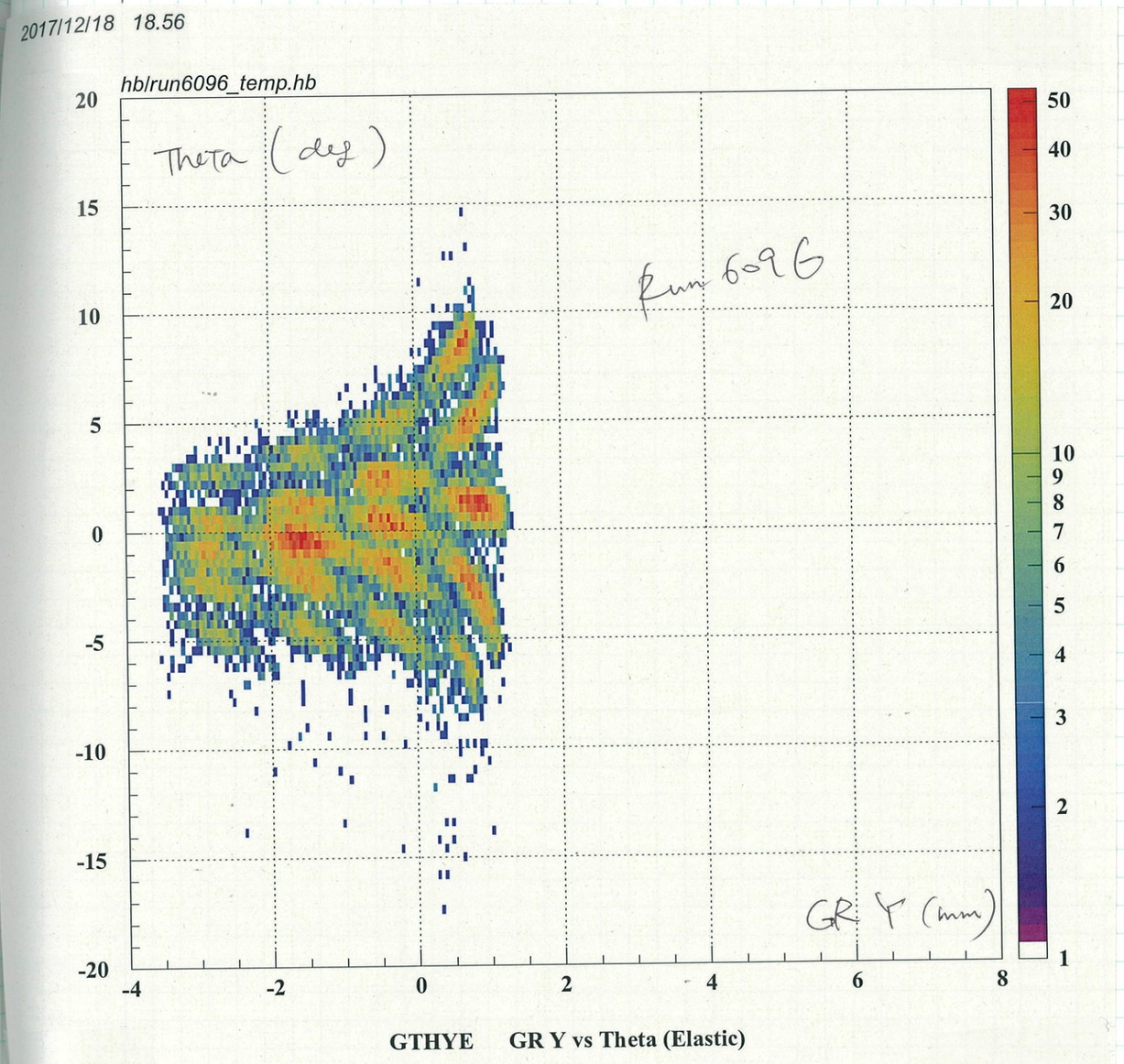
GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: _____

18:48 VDC trip

6098 同じ条件でとる

18:52 VDC trip



E492 run sheet signature: Ami

Run#: 6099 Title: Au, Sieve slit BI=5nA ~~B4B~~ D1 D2 103%

Start time: 18:56 Stop time: _____ Target: Au

GR angle: 4.5° Temp Ladder: _____ [°C] room: _____ [°C]

ER trigger: self / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: ~~916.675~~ 916.674 [mT] D2: 916.611 [mT] Live: GR: 929 [%] LAS: _____ [%]

GR single(7): 1.5k [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: _____

File Option Hcopy Queue '17/12/18 18:55

Reaction

197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
Angle (lab.) / Energy	0	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			800.378	MeV/c
Rho			300	cm
Raito			103	%
Rho (DSR)		0	+	-
Q1	0	%	100.013	A
SX			19.350	A
Q2			9.037	A
D1	916.623	mT	243.822	A
D2	916.623	mT	457.395	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

VDC Flow 7°

WS Magnets: Mon Dec 18 18:58:13 JST 2017 Run 6100

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	100.013	100.100	A				
GR SX	19.350	19.300	A				
GR Q2	9.037	9.034	A				
GR D1		243.311	A	916.623	916.674	mT	---
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2	457.395	458.281	A	916.623	916.611	mT	---
GR DSR		0.054	A		Error	mT	
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments

Run 6098: Stopped

Messages

```
The network to the device is not working or the device is locked by another process.
java.net.SocketTimeoutException: connect timed out
2017/12/18 18:58:12 Could not open a connection to nmrorange.rcnp.osaka-u.ac.jp/192.1
The network to the device is not working or the device is locked by another process.
java.net.SocketTimeoutException: connect timed out
```

Update 10.0 sec | Save... | Load... | Page Setup... | Print... | Close

E492 run sheet signature: Ami

Run#: ~~60~~ 6100 Title: Au Sieve Slit BI 5nA θ's -43°.

Start time: 19:00:01 Stop time: 19:10:48 Target: Au

GR angle: 4.5 Temp Ladder: _____ [°C] room: _____ [°C]

ER trigger: self / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

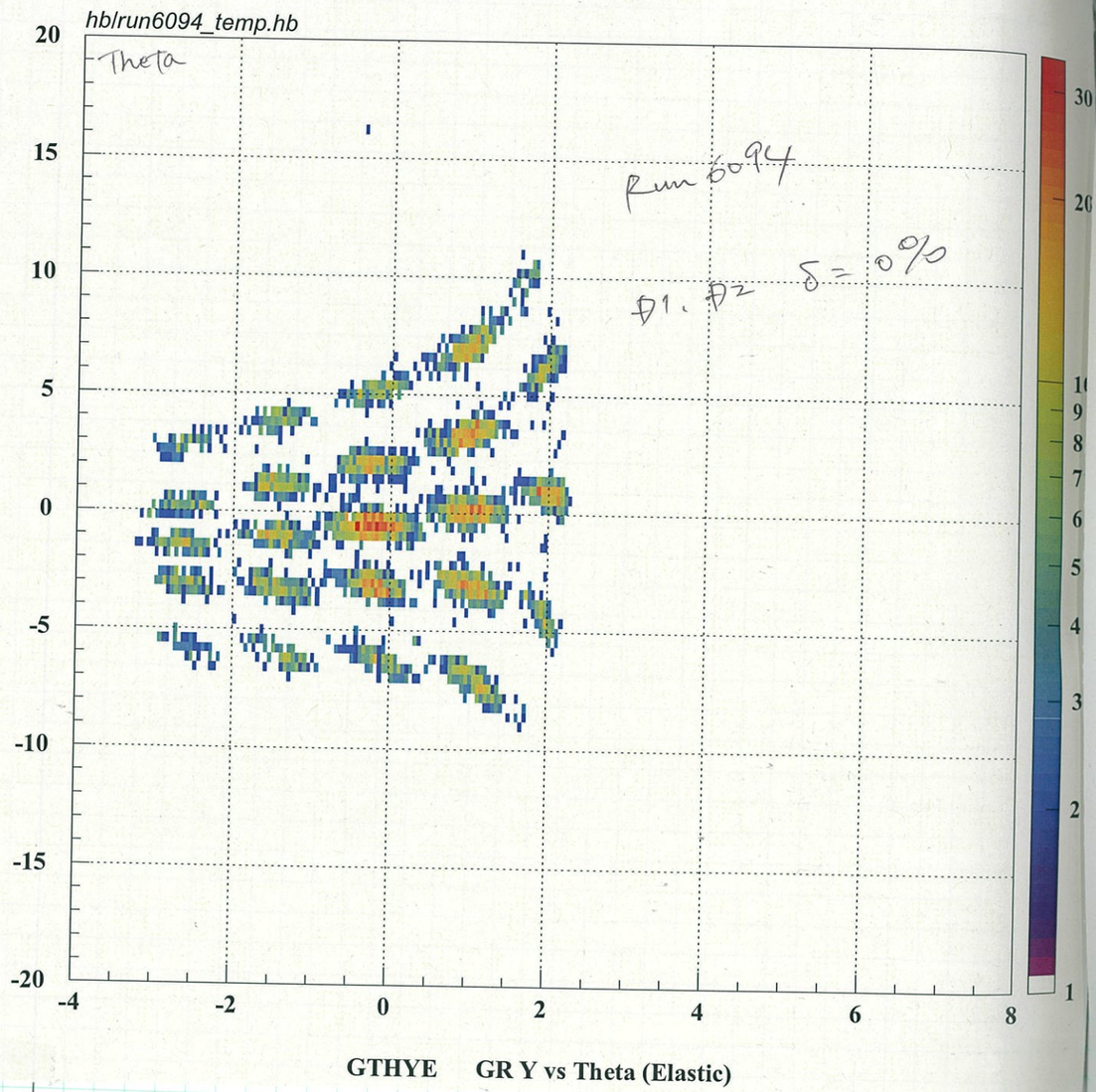
D1: ~~916.675~~ 916.674 [mT] D2: 916.611 [mT] Live: GR: _____ [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: _____

VDC Flow 7°

2017/12/18 19.04



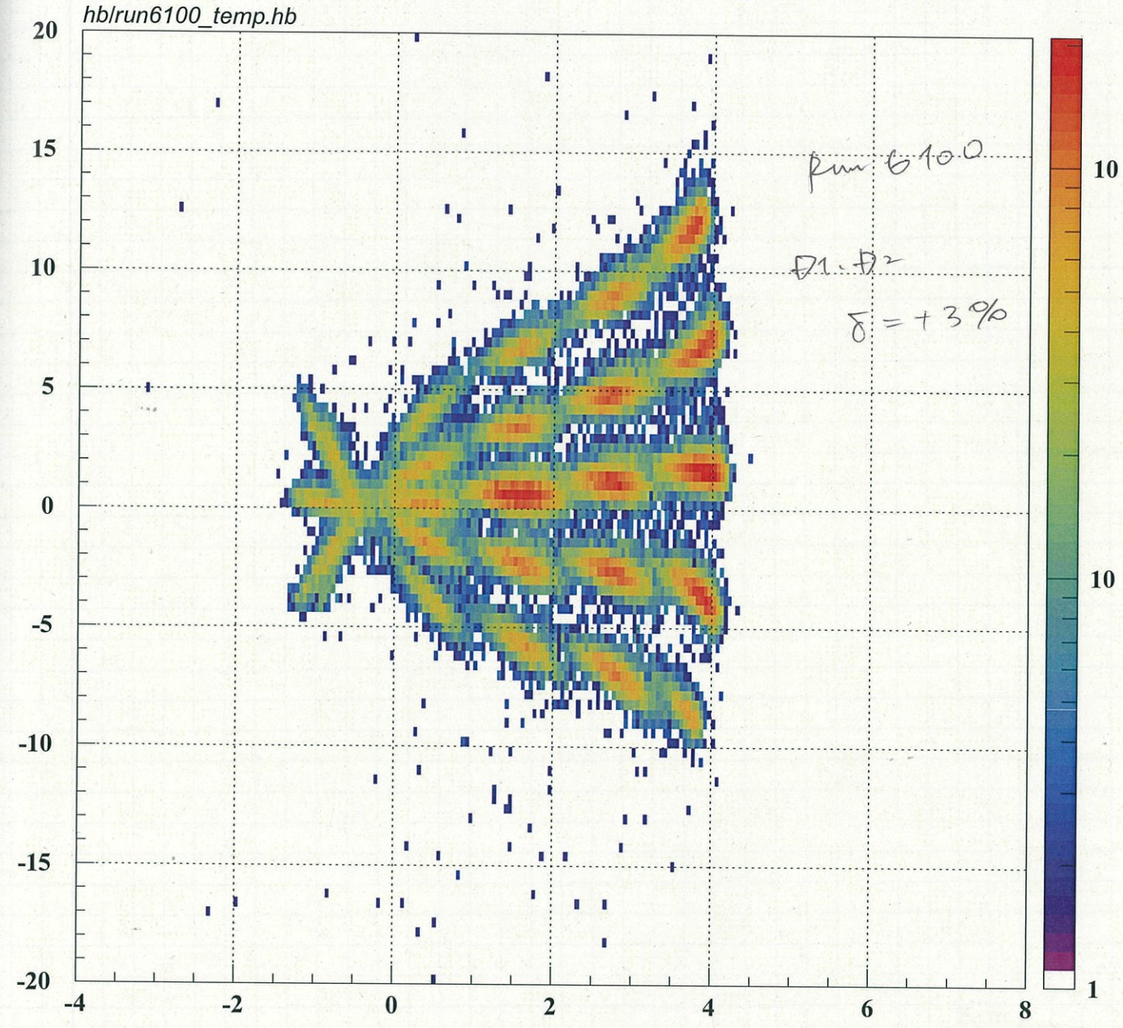
GTHYE GR Y vs Theta (Elastic)

Sieve Slit あり
elastic

~~19:~~
19:17

磁場を Au 100% に設定

2017/12/18 19.12



GTHY GR Y vs Theta

E492 run sheet signature: Ami

Run#: 6100.1 Title: Au, slit: blank,

Start time: 19:20:31 Stop time: _____ Target: Ar

GR angle: 45 Temp Ladder: _____ [°C] room: _____ [°C]

ER trigger: self / LED DAC: / Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: 889.925 [mT] D2: 889.925 [mT] Live: GR: 84 [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: _____

WS Magnets: Mon Dec 18 19:19:41 JST 2017

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	97.100	97.200	A				
GR SX	18.786	18.700	A				
GR Q2	8.774	9.034	A				
GR D1		235.656	A	889.925	889.919	mT	---
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2	457.395	443.692	A	889.925	889.936	mT	---
GR DSR		0.054	A		Error	mT	
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments

Run 6100: Stopped

励起状態が見切れている（反跳が大きい）？

↳ みえてた

石鹸場が最適化されていなかった事．角度がちがう．

↳ Au, Sieve Slit, δ = +3% / 0% ✓ / −1.5% ✓

File Option Hcopy Queue '17/12/18 19:19

Reaction

197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
◆ Angle (lab.) ◇ Energy	0	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			800.378	MeV/c
Rho			300	cm
Raito			100	%
Rho (DSR)	◆ 0	◇ +	◇ -	
Q1	0	%	97.100	A
SX			18.786	A
Q2			8.774	A
D1	889.925	mT	236.720	A
D2	889.925	mT	444.073	A
MQ			0.000	A
MS			0.000	A
DSR	0.000	mT	0.000	A

磁場

スリット

標的

Al 4.5° 100% a ていど

WS Magnets: Mon Dec 18 19:31:03 JST 2017

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	97.085	97.100	A				
GR SX	18.783	18.700	A				
GR Q2	8.772	8.767	A				
GR D1		235.656	A	889.790	889.809	mT	---
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2	457.395	443.441	A	889.790	889.309	mT	---
GR DSR		0.054	A		Error	mT	
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments

Run 6101: Stopped

Messages

```
2017/12/18 19:31:02 Pending opening connection (10 sec) due to the following previous
Could not open a connection to nmrorange.rcnp.osaka-u.ac.jp/192.168.2.203:10001.
The network to the device is not working or the device is locked by another process.
java.net.SocketTimeoutException: connect timed out
2017/12/18 19:31:03 Closing the stream to nmrred.rcnp.osaka-u.ac.jp/192.168.2.202:100
```

Update 10.0 sec | Save... | Load... | Page Setup... | Print... | Close

E492 run sheet signature: Ami

Run#: 6102 Title: Al, slit blank, D1D2 Al 100%

Start time: 19:29:30 Stop time: _____ Target: Al

GR angle: 4.5 Temp Ladder: _____ [°C] room: _____ [°C]

ER trigger: self / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: 889.809 [mT] D2: 889.309 [mT] Live: GR: 93.4 [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: _____

File Option Hcopy Queue '17/12/18 19:30

Reaction

27 Al (1 H , 1 H) 27 Al

Incident energy 295 MeV

Excitaion energy 0 MeV

◆ Angle (lab.) ◇ Energy 4.5 deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			800.257	MeV/c
Rho			300	cm
Raito			100	%
Rho (DSR)	◇ 0	◆ +	◇ -	
Q1	0	%	97.085	A
SX			18.783	A
Q2			8.772	A
D1	889.790	mT	236.684	A
D2	889.790	mT	444.005	A
MQ			-12.733	A
MS			0.000	A
DSR	1334.686	mT	148.546	A

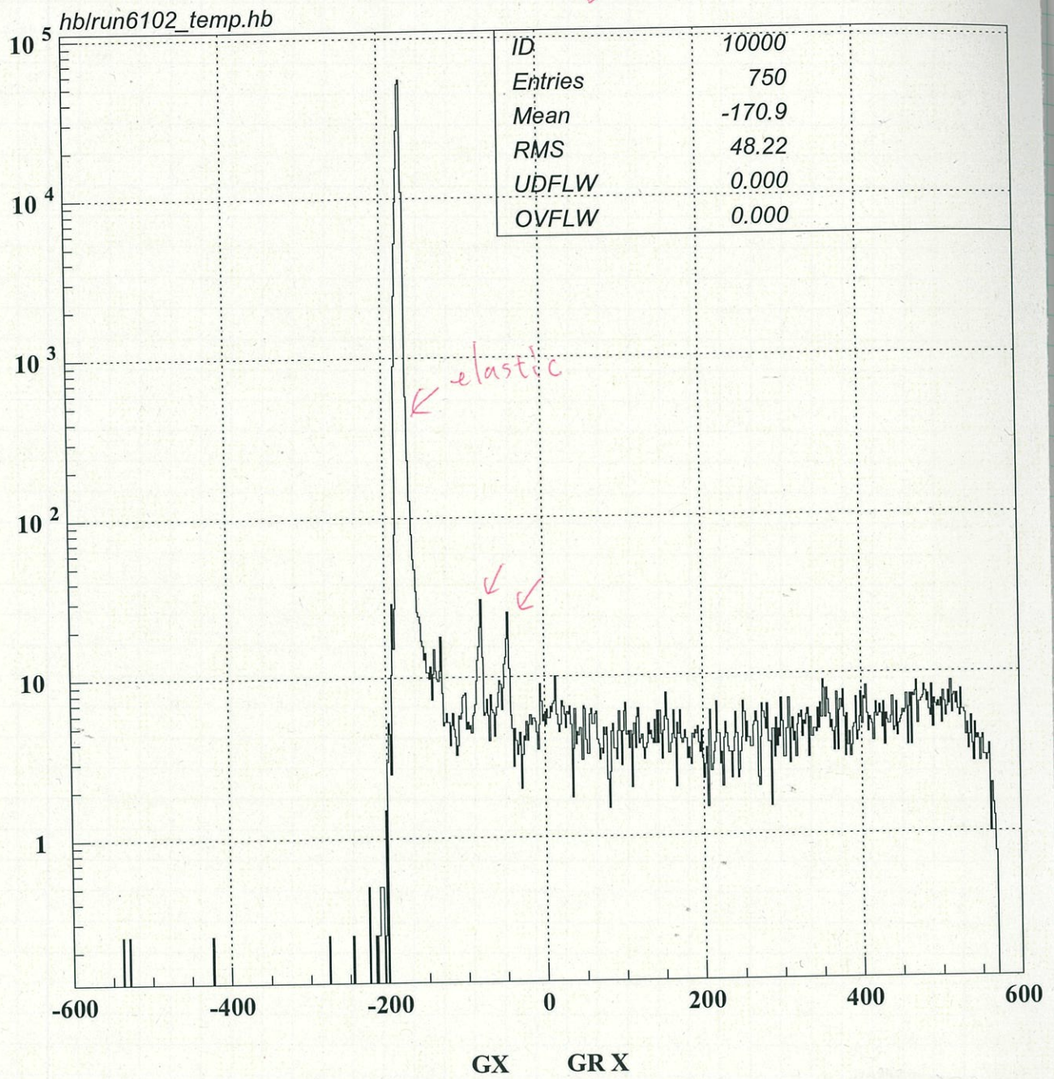
スリット blank → sieve slit

標的 Al → Au

Mag Au 4.5°, ~~89~~ 0%

2017/12/18 19.41

$^{26}Al(p,p)$



^{27}Al 643.76 keV

1014

2212

2734

2962

3004

3680

3956

E492 run sheet signature: Ami

Run#: 6107~~3~~ Title: Au, Sieve slit, BI=5nA ~~D1 D2 45°~~

Start time: 19:46:01 Stop time: _____ Target: Au

GR angle: _____ Temp Ladder: _____ [°C] room: _____ [°C]

ER trigger: self / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: _____ [mT] D2: _____ [mT] Live: GR: _____ [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: _____

WS Magnets: Mon Dec 18 19:45:51 JST 2017 Run 6107~~3~~

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL		
GR Q1	97.098	97.100	A				
GR SX	18.786	18.700	A				
GR Q2	8.774	8.767	A				
GR D1		235.795	A	889.907	889.926	mT	---
GR MQ		0.000	A				
GR MS		0.330	A				
GR D2	457.395	443.692	A	889.907	889.901	mT	---
GR DSR		0.054	A		Error	mT	
LAS Q		0.000	A				
LAS D		0.000	A		Error	mT	

Comments

Run 6102: Stopped

Messages

```
java.net.SocketTimeoutException: connect timed out
2017/12/18 19:45:47 Opening tag: LAS.D.NMR
2017/12/18 19:45:47 No reply from the device LAS.D.NMR.
2017/12/18 19:45:51 Opening tag: GR.D1.NMR
2017/12/18 19:45:51 Opening a stream to nmrbrown.rcnp.osaka-u.ac.jp/192.168.2.201:100
```

Update 10.0 sec | Save... | Load... | Page Setup... | Print... | Close

~~D7~~ 19:52 VDC トリガー レート取れてそう。 2k (GR trig.) 2.5nA

File | Option | Hcopy | Queue '17/12/18 19:45

Reaction: 197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
◆ Angle (lab.) ◇ Energy	4.5	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle	Run 6107		1 H	
Momentum			800.362	MeV/c
Rho			300	cm
Raito			100	%
Rho (DSR)		◇ 0 ◆ + ◇ -		
Q1	0	%	97.098	A
SX			18.786	A
Q2			8.774	A
D1	889.907	mT	236.715	A
D2	889.907	mT	444.063	A
MQ			-12.735	A
MS			0.000	A
DSR	1334.860	mT	148.565	A

E492 run sheet signature: Ami

Run#: 6108~~4~~ Title: Au, Sieve Slit BI: 2.5nA D1 D2 45° Au 100%

Start time: 19:50:.. Stop time: 19:57:39 Target: Au

GR angle: 4.5 Temp Ladder: _____ [°C] room: _____ [°C]

ER trigger: ~~self / LED~~ DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

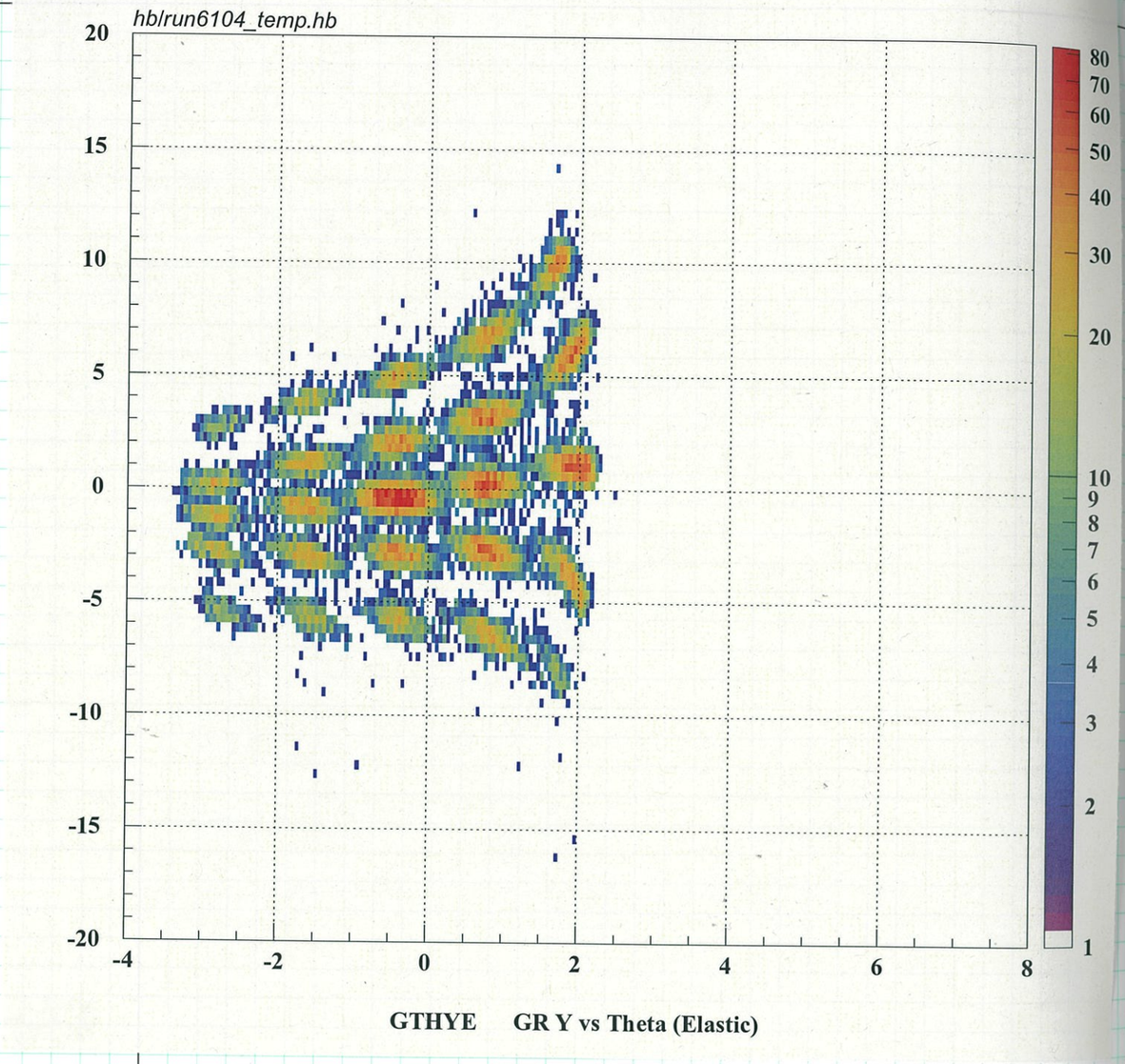
D1: ~~889.907~~ [mT] D2: 889.907 [mT] Live: GR: _____ [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: _____

エネ 98.5%

2017/12/18 20.00



GTHYE GR Y vs Theta (Elastic)

E492 run sheet signature: Aw

Run#: 6104~~5~~ Title: Au Sieve Slit B1 2.5nA -D1.D2 4.5° Au 98.5%

Start time: 20:03:22 Stop time: 20:11:38 Target: Au

GR angle: 4.5 Temp Ladder:

ER trigger: self / LED DAC: SI

D1: [mT] D2: [

GR single(7): [Hz] LAS single(10)

Comment:

Run 6104~~5~~

WS Magnets: Mon Dec 18 20:05:01 JST 2017

WS Magnets / HIPIS	PRESET	ACTUAL					
GR Q1	95.641	95.700	A				
GR SX	18.504	18.400	A				
GR Q2	8.642	8.634	A				
GR D1		232.037	A	876.558	876.519	mT	---
GR MQ		0.000	A				
GR MS		0.000	A				
GR D2	457.395	436.901	A	876.558	876.562	mT	---
GR DSR		0.054	A		Error	mT	
LAS Q		0.000	A				
LAS D		0.100	A		Error	mT	

876.576 (前日)

Comments

Run 6104: Stopped

Messages

```
2017/12/18 20:04:56 Could not open a connection to nmrorange.rcnp.osaka-u.ac.jp/192.1
The network to the device is not working or the device is locked by another process.
java.net.SocketTimeoutException: connect timed out
2017/12/18 20:04:58 Opening tag: LAS.D.NMR
2017/12/18 20:04:58 No reply from the device LAS.D.NMR.
```

Update 10.0 sec | Save... | Load... | Page Setup... | Print... | Close

File Option Hcopy Queue '17/12/18 20:04

Reaction: 197 Au (1 H , 1 H) 197 Au

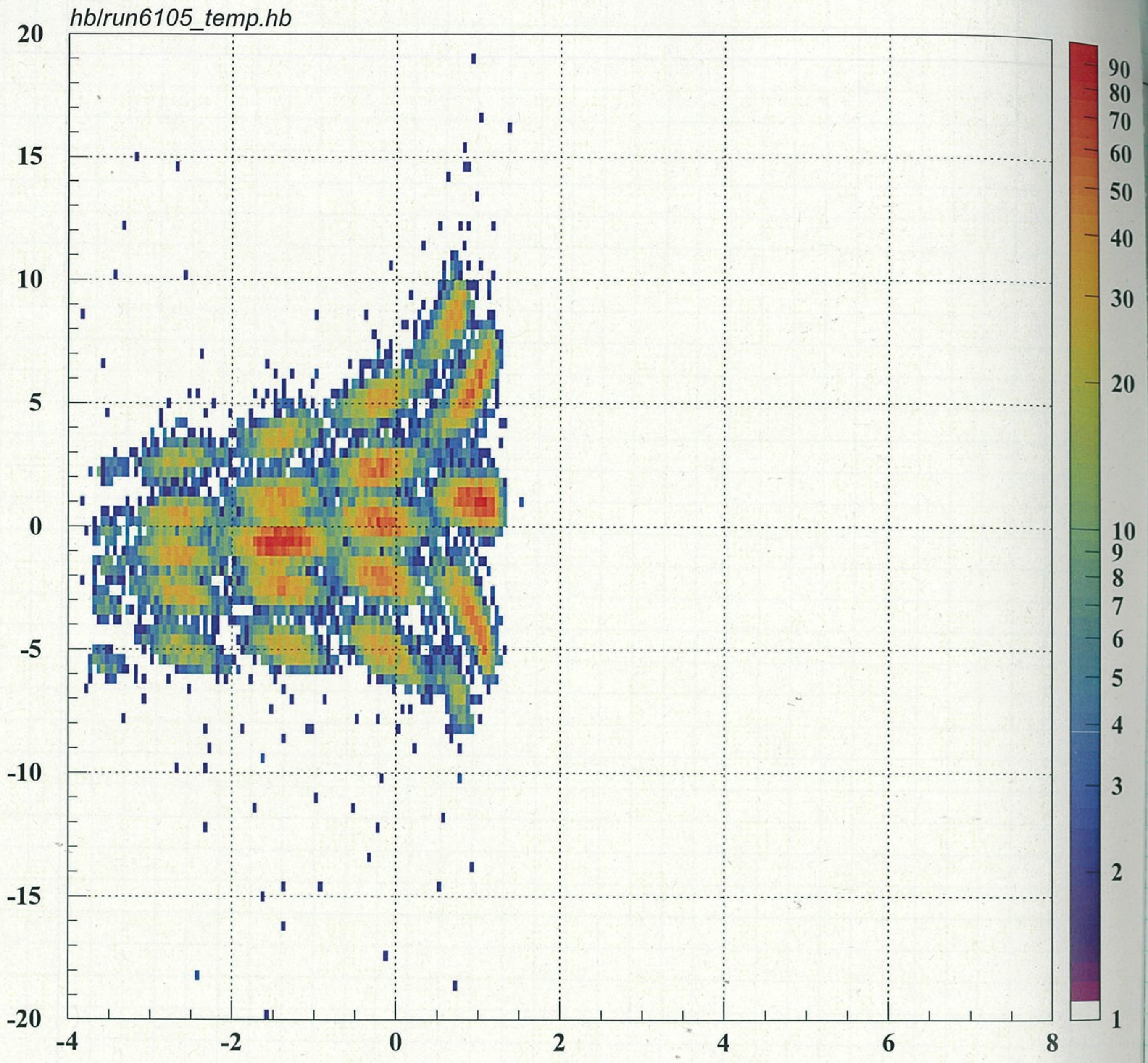
Incident energy	295	MeV
Excitaion energy	0	MeV
Angle (lab.) / Energy	4.5	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle			1 H	
Momentum			800.362	MeV/c
Rho			300	cm
Raito			98.5	%
Rho (DSR)		0	+	-
Q1	0	%	95.641	A
SX			18.504	A
Q2			8.642	A
D1	876.558	mT	233.164	A
D2	876.558	mT	437.402	A
MQ			-12.544	A
MS			0.000	A
DSR	1314.837	mT	146.337	A

2017/12/18 20.16



GTHYE GR Y vs Theta (Elastic)

次は +3%

E492 run sheet

signature: Aoi

Run#: 6106 Title: Sieve Slit, D1D2. Au+3% 4.5°

Start time: 20:16:41 Stop time: 20:19:36 Target: Au

GR angle: 4.5° Temp Ladder: ____ [°C] room: ____ [°C]

ER trigger: self / LED DAC: ____ Shaping Time: (HG) ____ [ns] (LG) ____ [ns]

D1: 916.604 [mT] D2: 916.604 [mT] Live: GR: 98 [%] LAS: ____ [%]

GR single(7): ____ [Hz] LAS single(10): ____ [Hz] COIN(11): ____ [Hz]

Comment: VDC tripped 途中で磁場が大きくうごいた。

GX が 2成分が出る

WS Magnets: Mon Dec 18 20:18:11 JST 2017 Run 6106

WS Magnets | HIPIS

	PRESET	ACTUAL		PRESET	ACTUAL	
GR Q1	100.011	100.000	A			
GR SX	19.350	19.300	A		916.623 (読む)	
GR Q2	9.037	9.034	A			
GR D1		243.311	A	916.604	916.653	mT ---
GR MQ		0.000	A			
GR MS		0.000	A			
GR D2	457.395	458.029	A	916.604	916.581	mT ---
GR DSR		0.054	A		Error	mT
LAS Q		0.000	A			
LAS D		0.000	A		Error	mT

Comments

Run 6105: Stopped

File Option Hcopy Queue '17/12/18 20:18

Reaction

197 Au (1 H , 1 H) 197 Au

Incident energy	295	MeV
Excitaion energy	0	MeV
◆ Angle (lab.) ◇ Energy	4.5	deg.

Figure | Text | GR | LAS

Magnetic Field

Particle	1 H	
Momentum	800.362	MeV/c
Rho	300	cm
Raito	103	%
Rho (DSR)	◇ 0 ◆ + ◇ -	

Q1	0 %		100.011	A
SX			19.350	A
Q2			9.037	A
D1	916.604	mT	243.817	A
D2	916.604	mT	457.385	A
MQ			-13.117	A
MS			0.000	A
DSR	1374.906	mT	153.022	A

~~VDC~~ VDC トリップした。

Run 6107 やりなおし。

E492 run sheet signature: Ami

Run#: 6107 Title: Sieve Slit, D1D2 Au +3% 4.5°

Start time: 20:16:41 Stop time: _____ Target: Au

GR angle: 4.5° Temp Ladder: _____ [°C] room: _____ [°C]

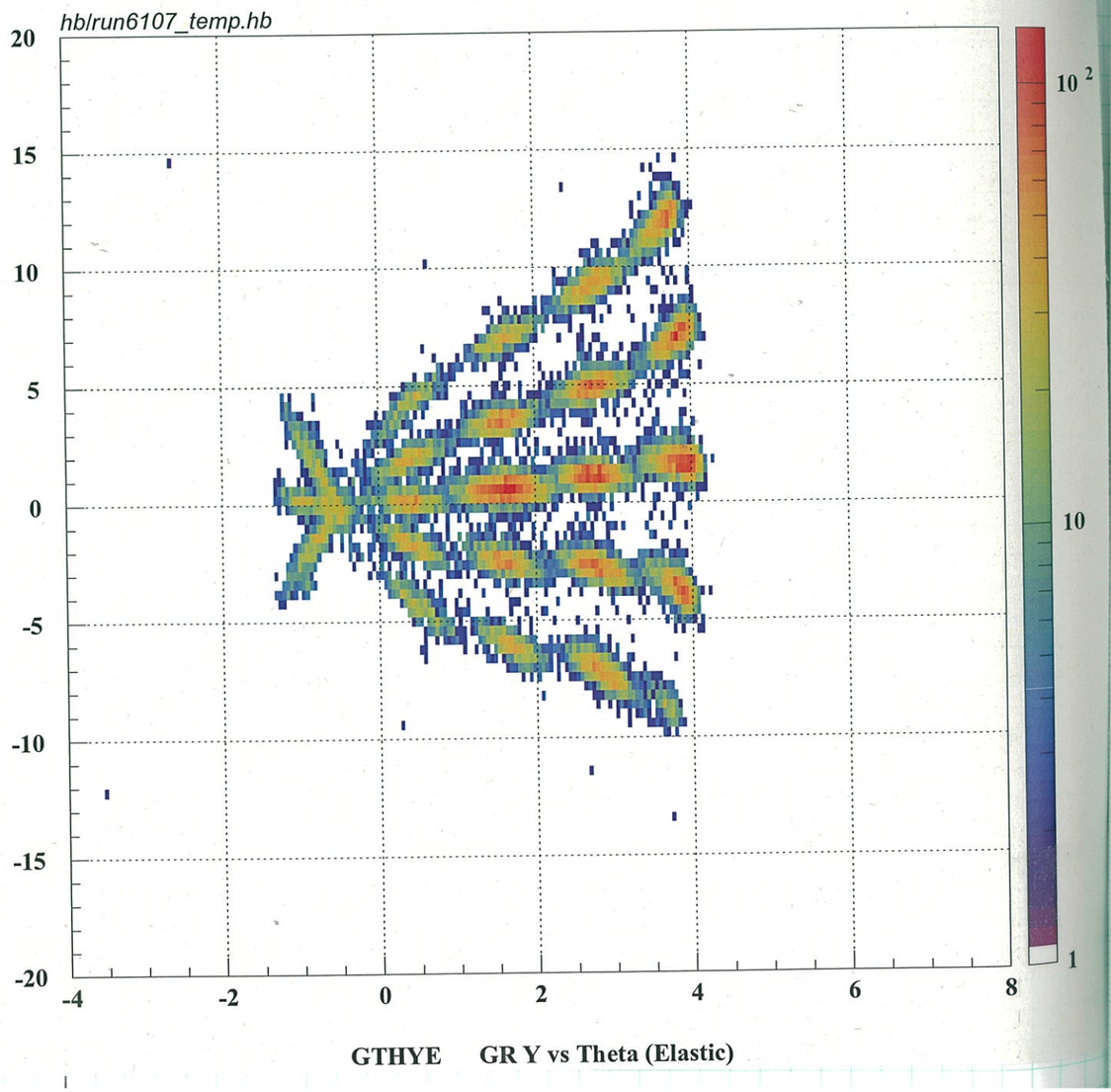
ER trigger: self / LED DAC: _____ Shaping Time: (HG) _____ [ns] (LG) _____ [ns]

D1: 916.604 [mT] D2: 916.604 [mT] Live: GR: 95 [%] LAS: _____ [%]

GR single(7): _____ [Hz] LAS single(10): _____ [Hz] COIN(11): _____ [Hz]

Comment: _____

2017/12/18 20.30



4044

4.220

220
44
264

4.132

3.245

position(V)

○ 3mm C 0.725
D 0.782

□ 1mm C 1.092
○ 1mm C 1.135
} LAS 1kHz くらい

0.887 V = 35 mm

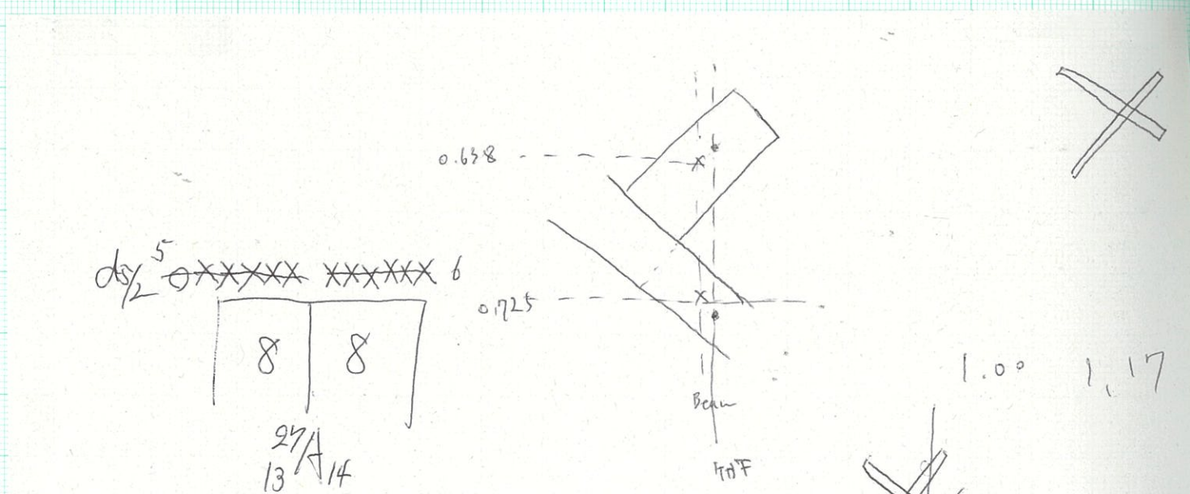
0.025 V/mm

4.5deg.
GR calib., beam spot 1.5h.
setup 変更 (GRまわり, ラダーなど 真空vc) 2h
ラダー2枚 1h + 1h 2h
setup 変更 (ラダーなど, cablingなど 真空vc) 2h
ラダー1 1h

8.5h 17:00

借り物リスト

日付	名称	番号	場所	返却
11/28	シーフ NIM ビン			
11/28	Logic delay	219		
11/28	Gate & Delay generator	343		
11/28	FIFO	225		
11/28	Attenuator	09		

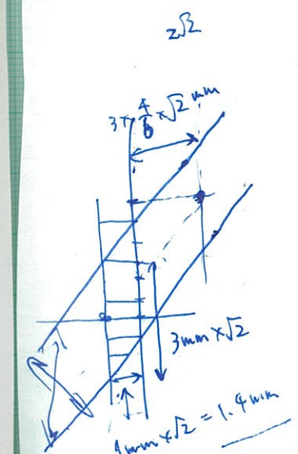


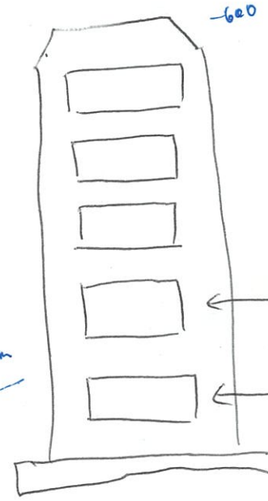
0
1 ×
9
2
3 ×
4 0
5 ×
6 0
7 ×

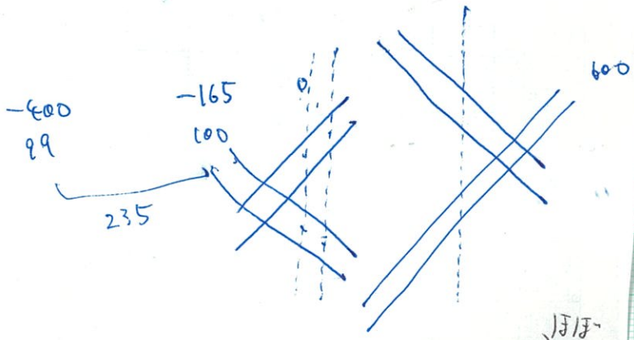
1.240
1.348
1.419
~0.3
1.538
1.390
1.258 +18
1.403 +13
1.548 +10
← 元とつながってない

16	4.5×10^5
17	1.2×10^5
18	9.5×10^5
19	8.4×10^5
20	7.8×10^5
21	2.2×10^5
22	4.5×10^3
23	2.9×10^4

$\frac{0.3}{4}=0.075$ $\frac{0.3}{8}=0.0375$
1.2775
1.3525
1.390
1.200
0.190





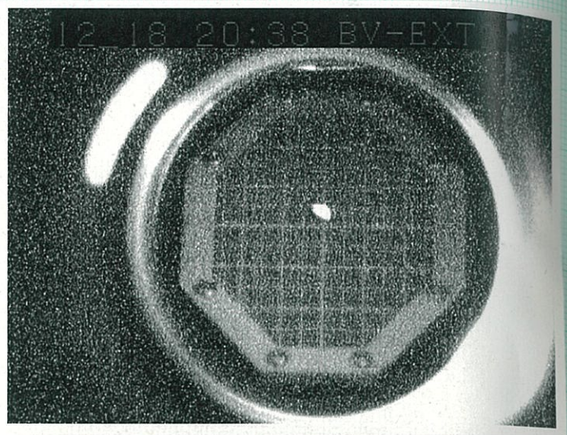


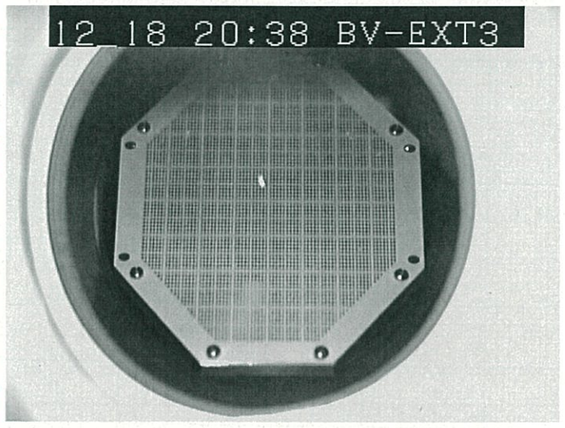
viewer. 3.256V → ladder #1 と同じ
Au, Al } ladder #1と同じ値でよい

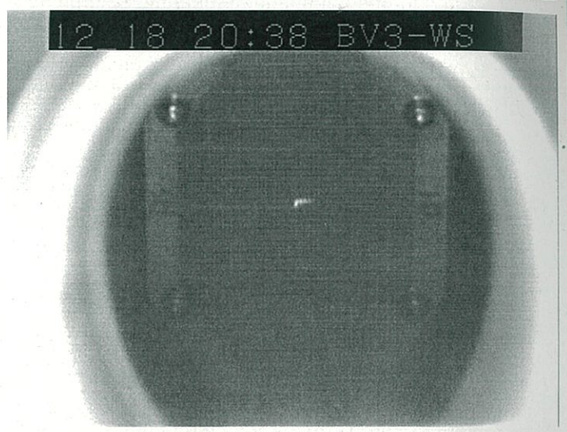
2.356 ← ずらす
3.245
4.049 − 4.134) 89
4.220
0.15

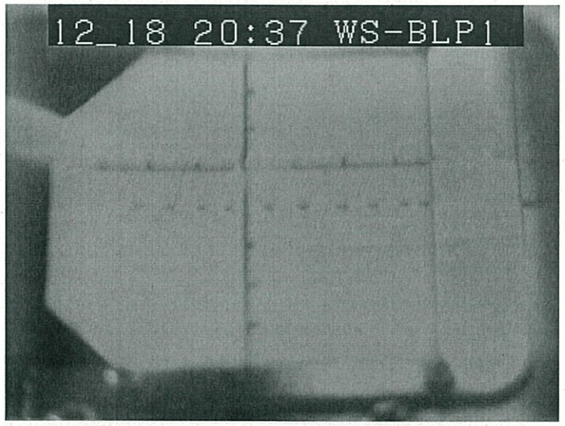
0.638
0.725
1.092
1.135
0.5×2.2 = 1.1mm
0.5×3.2 = 1.6mm
0.5×6.4 = 3.2mm

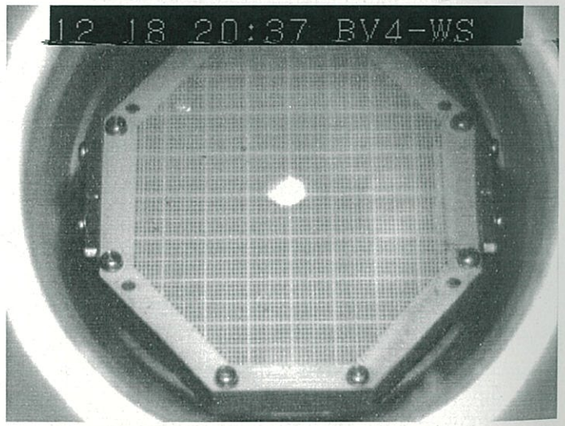

12_18 20:39 BV-EXT1

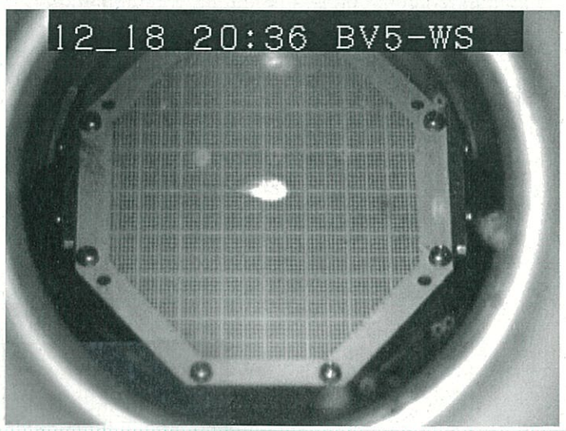

12_18 20:38 BV-EXT


12_18 20:38 BV-EXT3

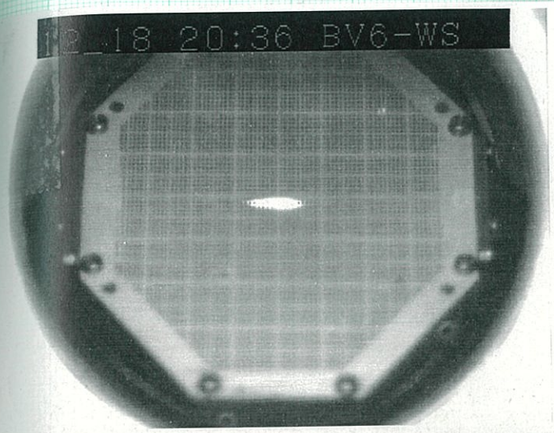

12_18 20:38 BV3-WS

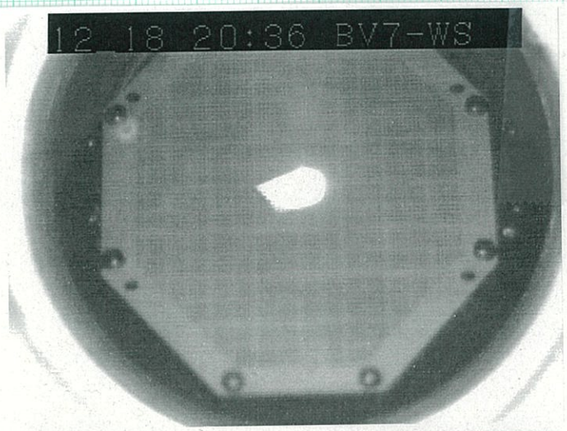

12_18 20:37 WS-BLP1

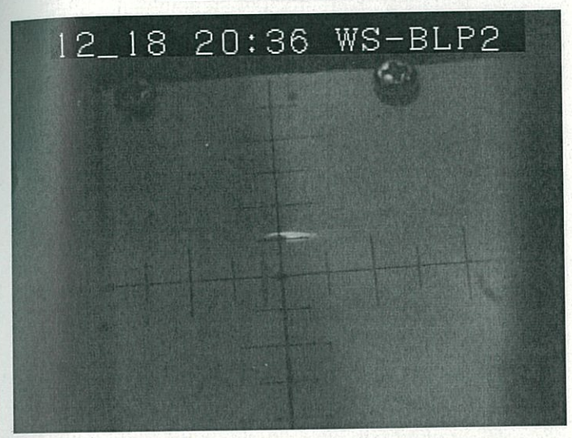

12_18 20:37 BV4-WS

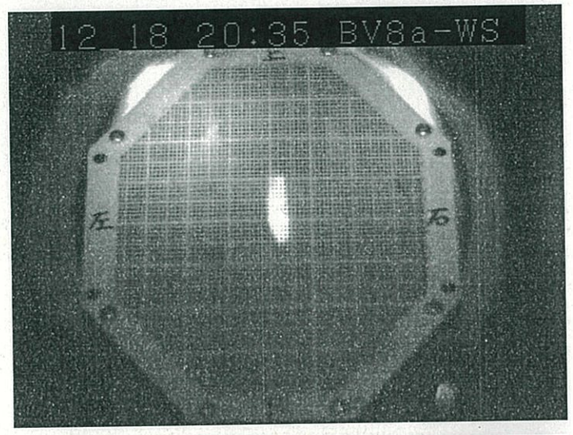

12_18 20:36 BV5-WS

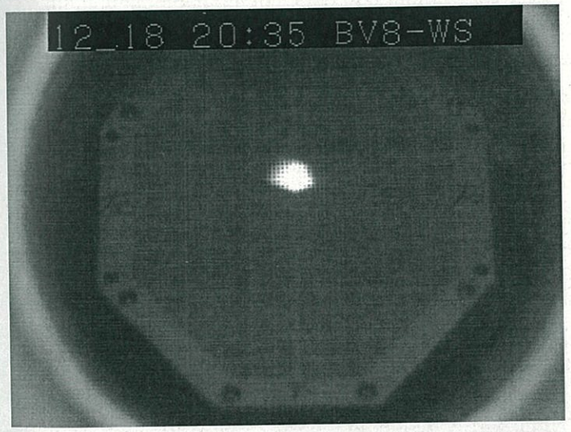

12_18 20:36 BV5b-WS

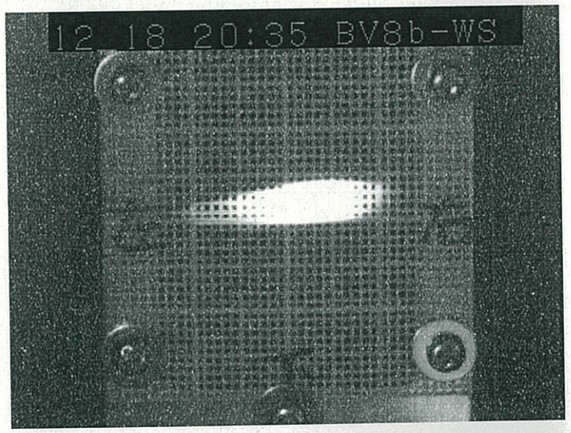

12_18 20:36 BV6-WS

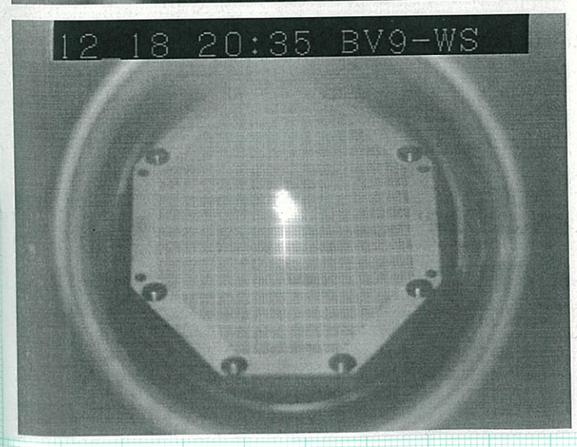

12_18 20:36 BV7-WS

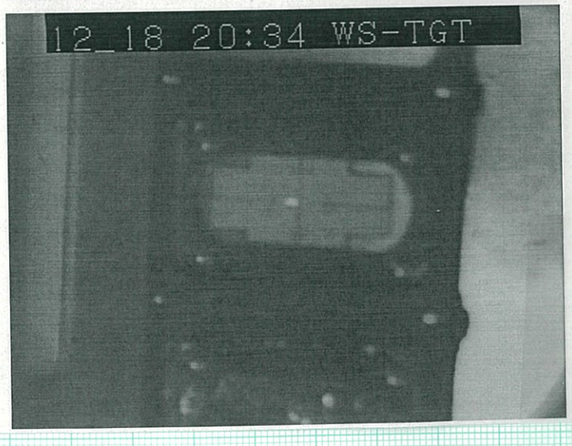

12_18 20:36 WS-BLP2


12_18 20:35 BV8a-WS


12_18 20:35 BV8-WS


12_18 20:35 BV8b-WS


12_18 20:35 BV9-WS


12_18 20:34 WS-TGT