

Log Book I  
86 Kr Fragmentation  
1-102

S: tests:

user: mcg

pass: obakiller

Beam monitors tests

NaI (TI) #1

$V = 1800 \text{ V}$

Bias

+ preamp

+ Amplifier

Gain = 200

Shaping = 3/15

Spectrum of  $^{60}\text{Co} =$

NaI (TI) #2

$U =$

+ preamp

+ Amp:

Gain:

Shaping:

Computer resources @ RIKEN

LINUX: rarflx1.riken.go.jp

rarflx2.riken.go.jp

rarflx3.riken.go.jp

UNIX: rarfaxp.riken.go.jp

rarfax1.riken.go.jp

rarfax2.riken.go.jp

Si tests

5/13/2004

FRONT side

@ 10:30 AM

we put 350  $\mu$ m detector

A0033

A0023 in

$f_{16}$ : A0023-0.05V

+90.3 V

0.013  $\mu$ A

noise: ~10 mV

signal: 500 mV

Shaping time: 10  $\mu$ s

500  $\mu$ m detector IN

#14

(S4276-500T)

$V = +80V$

$I = 0.63 \mu A$

Shaping time: 6  $\mu$ s

FRONT side

Gain: 200

noise: 16 mV

signal: 500 mV

det 14: 0.05V

500  $\mu$ m detector IN

#32

(S4276-500T)

$V = +80V$

$I = 0.81 \mu A$

det 32-0.05V

FRONT side

noise = 16 mV

signal = 500 mV

shaping: 6  $\mu$ s  
gain = 200

500  $\mu$ m detector IN

#20

leakage current was 1  $\mu$ A at ~2V so we stopped.

we saw  $\alpha$  ISAs but no bias.

S426-00T

500  $\mu$ m detector #21

$U = +80V$

$I = 0.12 \mu A$

det21-0.csv

noise: 18 nV  
 signal: 550 nV

Shaping: 6  $\mu$ s  
 gain: 200

500  $\mu$ m detector #34

$U = +80V$

$I = 0.55 \mu A$

Shaping: 6  $\mu$ s  
 gain: 200

noise:  $\sim 20$  nV  
 signal: 512 nV

det34-0.csv  $\leftarrow$  only  $\alpha$ 's  
 det34-1.csv  $\alpha$  + pulser

2 P.A.

we isolated venting pump for air chamber  
 + the thermocouple is isolated too

It is still #34 detector is

$U = +80V$   
 $I = 0.55 \mu A$

Shaping = 1  $\mu$ s  
 Gain = 500

Rise: 3  $\mu$ s on Pulser  
 Fall: 10  $\mu$ s

① file: det34-2.csv

② file: det34-3.csv Shaping changed to 2  $\mu$ s  
 Gain = 500

③ file: det34-4.csv Shaping time: 3  $\mu$ s  
 Gain = 500

④ file: det34-5.csv Shaping time: 6  $\mu$ s  
 Gain: 500

⑤ file: det34-6.csv Shaping time: 10  $\mu$ s  
 Gain: 100

6. file: det34-7.csv

Shaping time = 1  $\mu$ s

Gain = 800

No pulser!

U = 80V  
I = 0.62  $\mu$ A

↓ ALL

8. file: det34-9.csv

Shaping time = 1  $\mu$ s

Gain 800

No pulser

I lowered the wire to

9. file: det34-10.csv

the same but w pulser

$\frac{d}{dt}$  FWHM<sub>d</sub> = 107

FWHM<sub>p</sub> = 98

10. file: det34-11.csv

Shaping time = 2  $\mu$ s

FWHM<sub>d</sub> = 106

FWHM<sub>p</sub> = 98

with pulser

11. file: det34-12.csv

Shaping time = 3  $\mu$ s

FWHM<sub>d</sub> = 109

FWHM<sub>p</sub> = 89

with pulser

12. file: det34-13.csv

shaping time = 6  $\mu$ s

FWHM<sub>d</sub> = 131

FWHM<sub>p</sub> = 121

with pulser

13. file: det34-14.csv

shaping time = 10  $\mu$ s

FWHM<sub>d</sub> = ~~132~~ 176

FWHM<sub>p</sub> = ~~122~~ 152

with pulser

5/14/04

testing silicon detectors (500  $\mu\text{m}$ )

we are using 2  $\mu\text{s}$  shaping time on amplifier

det 34 Bias +95V  $I = 0.48 \mu\text{A}$  120 second run

/// S actual time

det34f-0.csv  $\leftarrow$  front side with  $\uparrow$  parameters set

det34b-0.csv  $\leftarrow$  back side  $\leftarrow$  501 sec.

---

detector # 21 shaping = 2  $\mu\text{s}$  (500  $\mu\text{m}$ )

$U = +95\text{V}$

$I = 0.12 \mu\text{A}$

signal = 1.25V

noise = 40 mV

bipolar signal

front side: det21f-0.csv

back side: det21b-0.csv

noise  $\leftarrow$  and leakage current is the same as in the previous case

---

detector # 80

(500  $\mu\text{m}$ )

shaping = 2  $\mu\text{s}$

$U = +95\text{V}$

$I =$

signal =

noise =

bipolar

front side: det80f-0.csv

cannot bias this detector  $\rightarrow$  huge leakage current  $> 5 \mu\text{A}$

detector #32

(500  $\mu\text{m}$ )

$U = +9.5\text{V}$   
 $I = 0.86 \mu\text{A}$

noise = 40 mV  
signal = 1.34 V

bipolar

Front side: det32f-0.csv

Back side: det32b-0.csv

detector #14

(500  $\mu\text{m}$ )

$U = +9.5\text{V}$   
 $I = 0.72 \mu\text{A}$

noise = 40 mV  
signal = 1.30 mV

bipolar

Front side: det14f-0.csv

Back side: det14b-0.csv

noise like same

A0031 detector

(350  $\mu\text{m}$ )

$U = +9.5\text{V}$   
 $I = 0.10 \mu\text{A}$

noise = 40 mV  
signal = 1.4 V

bipolar sig

Front side: a0031f-0.csv

Back side: a0031b-0.csv

A0033 detector

(350  $\mu\text{m}$ )

$U = +9.5\text{V}$   
 $I = 0.015 \mu\text{A}$

noise = 34 mV  
signal = 1.36 V

front: det33f-0.csv

back: det33b-0.csv

5/17/04

detector #34: cable changed

Bias +95V, I = 0.49  $\mu$ A

We see  $\alpha$ 's and pulser

Run det34f-1.csv Front side

File: det34b-1.csv

noise: ~36 mV bip-lex  
signal: 800 mV  $\leftarrow$  for the back side

det # 23

new cable soldered:

U = +95V

I = 0.05  $\mu$ A

Signal: 1.4 V  
noise: 25 mV

det 23f-0.csv

FRONT side

BACK side

Signal: 700  $\mu$ V  
noise: 25 mV

Stack assembled:

- |       |
|-------|
| A0033 |
| #32   |
| #14   |
| #23   |
| #21   |



5/20/2004

detector #22

noise = 250  $\mu$ V before biasing

noise = 25 mV  
Signal = 1.4 V

$V = +95$  V  $I = 0.05$   $\mu$ A.

files      det22s-0.csv      front  
             det22b-0.csv      back

---

detector #26

Signal: 1.40 V  
noise: 26 mV

bias: +95V  
 $I = 0.11$   $\mu$ A

FRONT: det26f-0.csv  
BACK: det26b-0.csv

---

detector #25

Signal: 1.40 V  
noise: 27 mV

$V = +95$  V  
 $I = 0.04$   $\mu$ A

FRONT: det25f-0.csv  
BACK: det25b-0.csv

---

det #30

Signal = 1.40 V  
noise = 23 mV

bias = +95 V  
 $I = 0.08$   $\mu$ A

front      det30f-0.csv  
back      det30b-0.csv

detector A0017

$$I = 0.015 \mu A$$
$$V = +95V$$

$$\text{noise} = 25 \text{ mV}$$
$$\text{signal} = 1.30 \text{ V}$$

FRONT : A0017f - 0. csv

BACK : A0017b - 0. csv

det A0025

$$I = 0.20 \mu A$$
$$V = +95V$$

$$\text{noise} = 25 \text{ mV}$$
$$\text{signal} = 1.35 \text{ V (front)}$$

front : A0025f - 0. csv

back : A0025b - 0. csv

det A0028

$$I =$$
$$V =$$

~~noise :~~

~~signal :~~

~~front :~~

~~back :~~

~~we had to play with connector to see signals.~~

~~signals were there and noise went down when biasing but current was very high~~

~~@ 10V, I = 1  $\mu$ A~~

det A0034

$$I = 0.72 \mu A$$

$$V = +95V$$

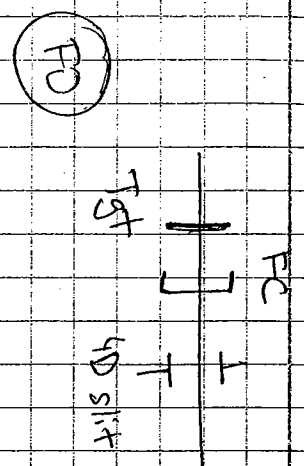
$$\text{noise} = 22 \text{ mV}$$

$$\text{signal} = 1.33 \text{ V}$$

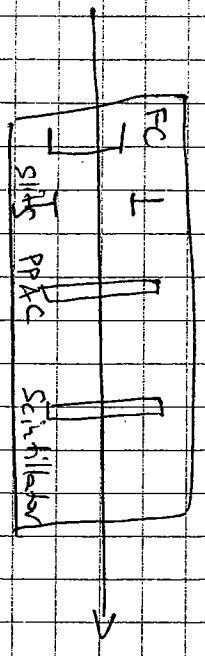
front : A0034f - 0. csv

1 1

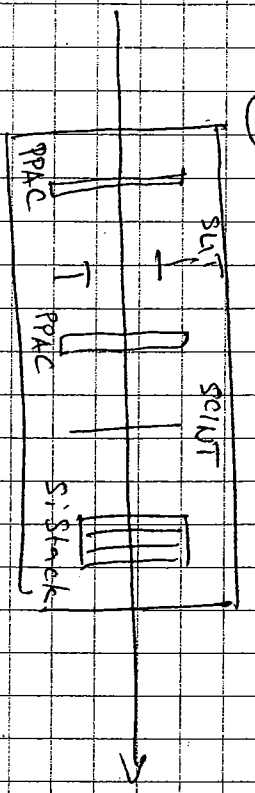
PPPS



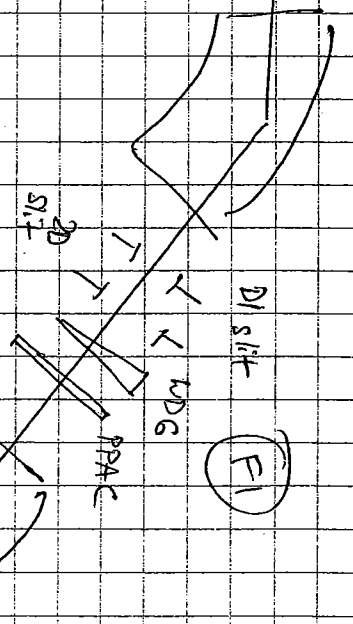
(F0)



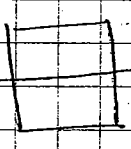
(F2)



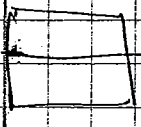
(F3)



(F1)

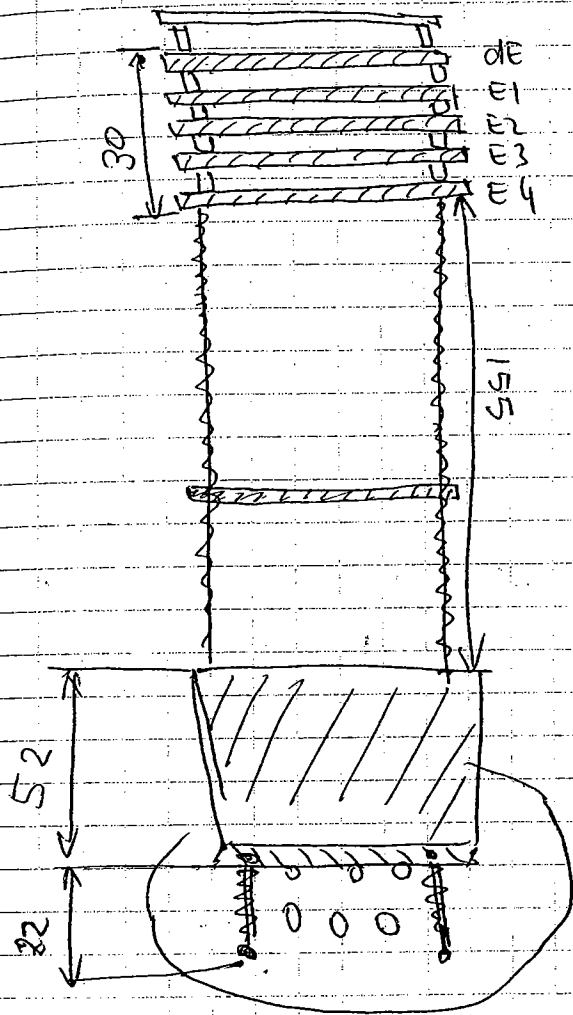


(F2)

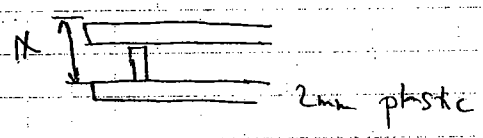


(F3)

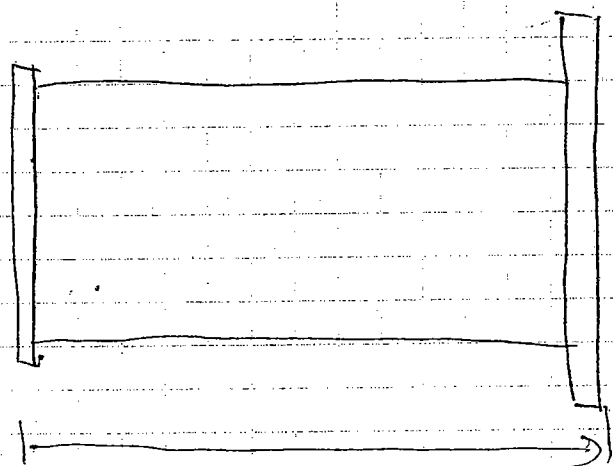
Si Stack :



DE = A0031  
E1 = #25  
E2 = #30  
E3 = #22  
E4 = #26



whole stack = 259 mm



343 mm

Beam monitors:

Dkno → 3 channels + 1 coincidence  
Mamota → 3 channels + 1 coincidence  
NAT or of 4 channels  
B&F

Si Stack:

dE → also 4 scalars

dE → two gains  
E1, E2, E3, E4 + F2SSD - one gain

F2 — split signals — leading edge discriminators  
OR of the two PMTs

SCALERS

NAT  
B&F  
Mamota  
Dkno  
Trigger 2x  
Clock 2x  
F3  
F2  
dE

6/1/2004

We installed and connected the Si stack detector  
channel names are DE, E1, E2, E3, E4

E4 ~ 2 MeV noise  
E3 ~ 1 MeV noise checked with pulser  
E2 ~ 1 MeV noise  
E1 ~ 10 MeV with timing filter amplifier  
2 MeV without timing filter amplifier  
DE ~ 1 MeV

after PreAmp we have 200 mV signals from pulser  
 $\frac{200}{1200} = \frac{1}{6} \times 3000 = \frac{3000}{6} = \underline{500}$  MeV signals

after the Amp we have: 2V signals (2) 500 MeV

$\frac{2000}{500} = 4 \frac{\text{mV}}{\text{MeV}}$  after the preAmp

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Kr86 Fragmentation Experiment Manpower

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TO	Onishi	
PS	Piroshi, Suzuki	
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D=08:00-16:00; O=16:00-23:00; N=23:00-08:00

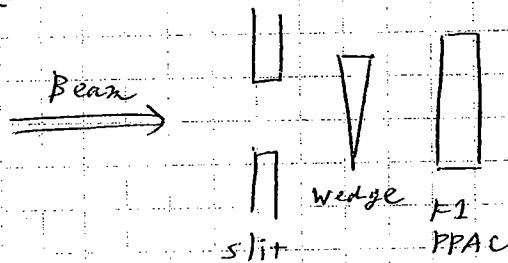
Na	6/3	6/4	6/4	6/4	6/5	6/5	6/5	6/6	6/6	6/6	6/7	6/7	6/7	6/8	6/8
	N	D	O	N	D	O	N	D	O	N	D	O	N	D	O
MM		X	X		X			X			X			X	
WL	x	X	x	x	x										
BT	x	x	X	x	x	X	X	x	X	x	x	X	x	X	X
AS		X	x		X	x			X		X	x			X
PD	X		x	X		X	X		X	x		X	x	x	x
AR	X			X			X			X			X		
JC		X	x		X	x		X	x		X	x		x	X
NA	X										X				
HI			X												
ET				X								X			
TO	X	X									X	X			
PS					X			X					X		
NI	X					X			X						X
HS		X													
MN		X					X			X				X	

HS - Sakurai

Michal Mocko  
Dinh Pham

# ★ Detectors of RIPS

**F1**



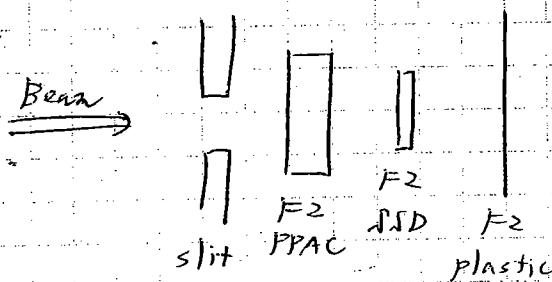
- F1 wedge --- upper # -1 (AR 60 mg/cm<sup>2</sup>)
- lower # 0 (AR ~~60~~ 116 mg/cm<sup>2</sup>)

- F1 PPAC --- inside of delay line
- X offset ~~1.09 ns~~ -2.19 ns
- Y ~~0.56 ns~~ -1.5 ns
- X speed 1.271 m/s
- Y 1.257 m/s

**threshold**

all cathode (x1, x2, y1, y2)  
-25 mV  
anode  
-28.5 mV

**F2**



- F2 plastic --- 0.1 m **threshold** R -80 mV, L -79.7 mV

- F2 SSD --- 350 mm

- F2 PPAC --- inside of delay line
- X offset 0.288 ns
- Y -0.905 ns

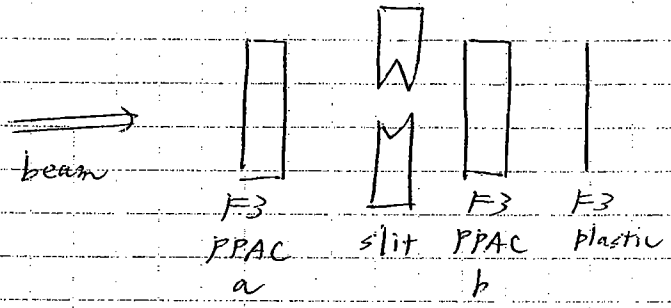
- X speed 1.234 m/s
- Y 1.253 m/s



Threshold

all  $-20 \mu V$

F3



• F3 plastic  $\sim 0.1 \mu s$

• F3 PPAC a -- inside of delay line

X offset  $-0.85 \mu s$   
 Y  $-1.85 \mu s$

X speed  $1.246 \mu s/\mu s$   
 Y  $1.254 \mu s/\mu s$

Threshold

- $\chi_1$   $34.5 \mu V$
- $\chi_2$   $35.9 \mu V$
- $\beta_1$   $34.8 \mu V$
- $\beta_2$   $34.8 \mu V$
- anode  $46.9 \mu V$

• F3 PPAC b -- inside of delay line

X offset  $-0.56 \mu s$   
 Y  $1.28 \mu s$

X speed  $1.245 \mu s/\mu s$   
 Y  $1.239 \mu s/\mu s$

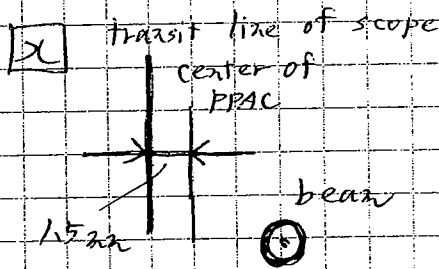
Threshold

- $\chi_1 = 34.8$        $\chi_2 = 34.7$        $a = 48.3$
- $\beta_1 = 34.7$        $\beta_2 = 34.6$       ( $\mu V$ )

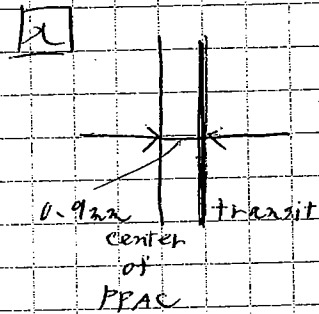
# ★ Geometry of the PPACs

F3 PPAC a (1) , PPAC b (2)

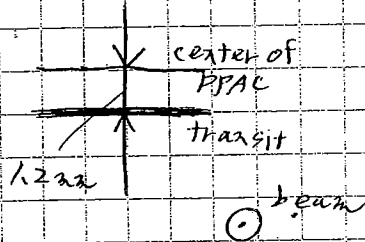
• PPAC b



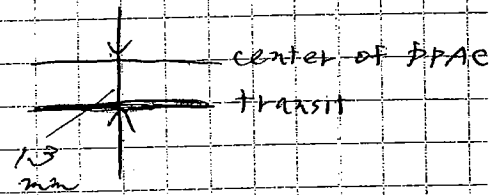
• PPAC a



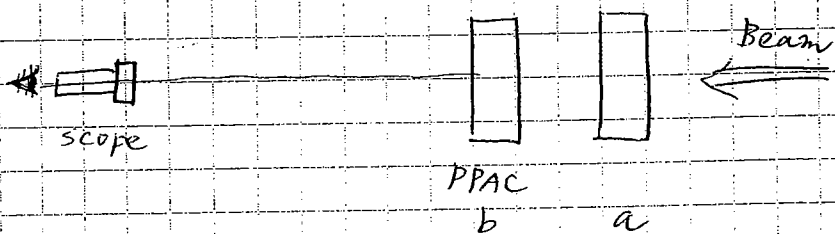
3



4

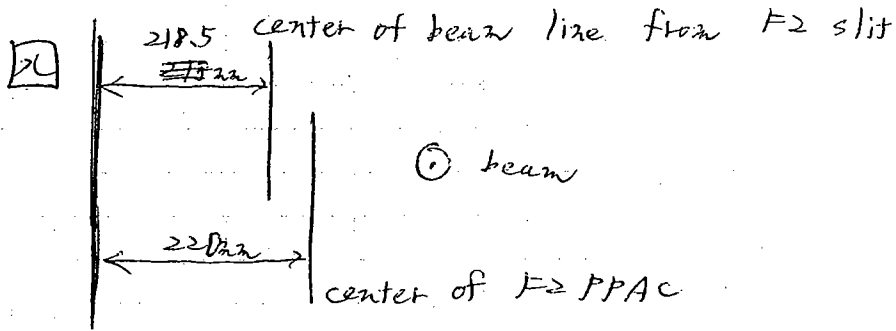


F3



To check the center of F3 PPACs ,  
 I used the scope , sett on the line  
 of the beam downstream.

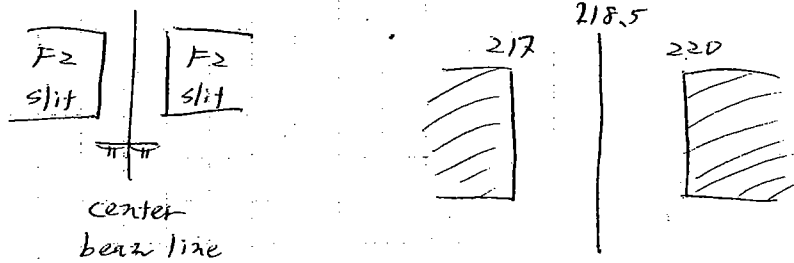
$F_2$   $F_2$  PPAC



inside wall  
of  $F_2$  chamber

We used ~~the~~ scale for measurement.

To know the beam line, we used  $F_2$  slit

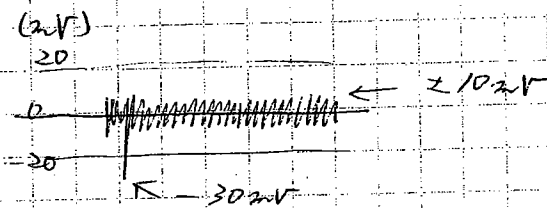


★ Noise

Checked the noises of detectors in beam line,  
at ~~F2~~ E6 room.

• F2 PPAC

anode E<sub>c</sub> Q<sub>x</sub>



max --- -30 mV  
other --- ±10 mV

• F1 PPAC

anode E<sub>c</sub> Q<sub>x</sub>

Same shape as F2 PPAC's noise

max --- -40 mV  
other --- ±15 mV



covered the cables with AL foils

max --- -20 mV (about half)

• F3 PPAC a

anode max -60 mV  
Q<sub>x</sub> -~~40~~ 50 mV

• F3 PPAC b

anode max -80 mV  
Q<sub>x</sub> -40 mV

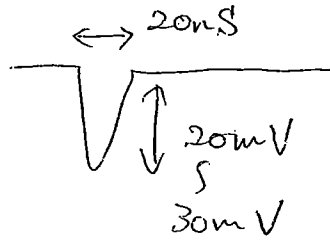
these are derived from Turbo pump of F3 chamber

computer id for ...

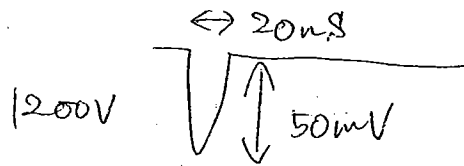
camac slot	0	1	2	3	4	channel	5	6	7	8	9	10
scaler	"ungated"	"gated"	clock	F1PP_T	F2_SI	CLEAR	F2PP_T	F3PP_T	E1	PL_2	PL_3	Y11
raw scaler	tgt_Nal	tgt_BaF	Momota	Okuna	FC	Momota 1	Momota 2	Momota 3	Okuno 1	Okuno 2	Okuno 3	Okuno 3
live scaler	tgt_Nal	tgt_BaF	Momota	Okuna	FC	Momota 1	Momota 2	Momota 3	Okuno 1	Okuno 2	Okuno 3	Okuno 3
Hoshin ADC	F2	DE_low	De_high	E1	E2	E3	E4					
TDC												
QDC	F2PL_L	F2PL_R	F3PL_L	F3PL_R								
QDC	F1Qx	F1Qy	F2Qx	F2Qy	F3aQx	F3aQy	F3bQx	F3bQy				
TDC	F1PP_X1	F1PP_X2	F1PP_Y1	F1PP_Y2	F2PP_X1	F2PP_X2	F2PP_Y1	F2PP_Y2				
TDC	F3PP_X1	F3PP_X2	F3PP_Y1	F3PP_Y2								
TDC	F1PP_T	F2PP_T	F3A_PP_T	F3B_PP_T								
TDC	F2PL_L_T	F2PL_R_T	F3PL_L_T	F3PL_R_T	RF1	RF2						
AD811	not used											
output reg.	buff_trans	event clear			stop run					start run		
coin reg.	F2_SSD*	DE*	E1*	E2*	E3*	E4*						
controller												

"ungated" = premaster  
 "gated" = master  
 \* = pile-up rejection signal

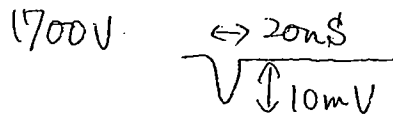
Okuno 1, 2, 3 OK  
1200V



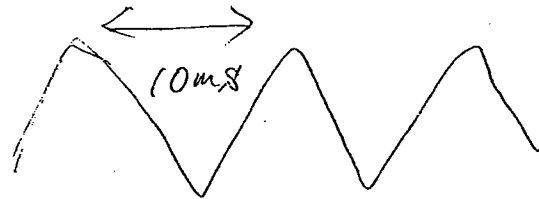
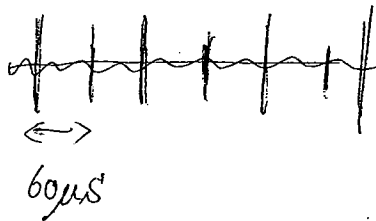
Momota Big OK



Momota Small 2



Very noisy.

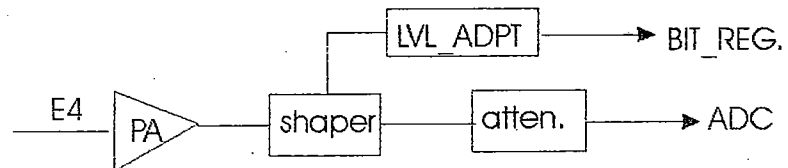
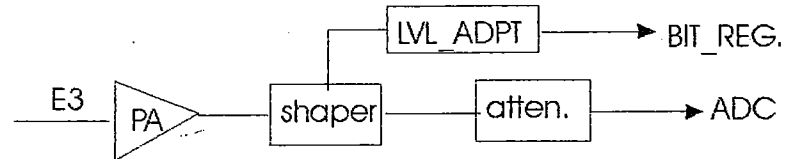
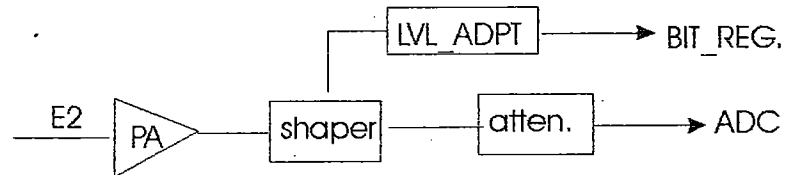
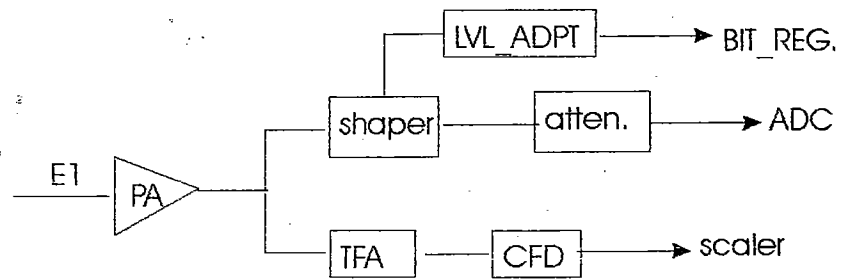
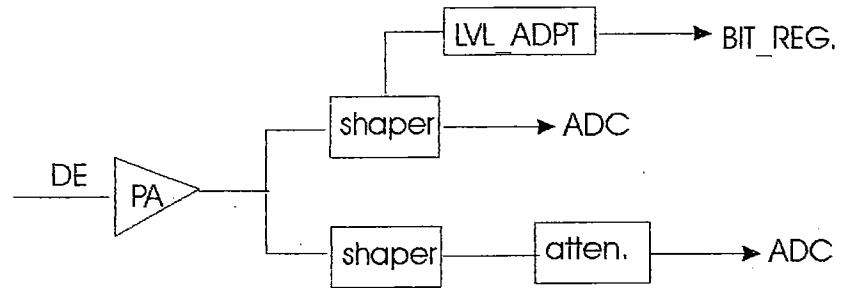
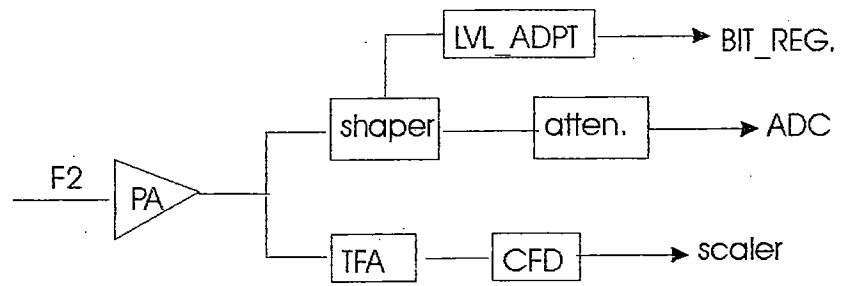


FO

# TARGET POSITIONS

Be 0.5 mm	194.6
Be 1.0 mm	161.6
Be 0.625 mm	128.5
Ta 0.1 mm	95.8
Zns	

# Silicon electronics - "taken as slave"





## Plan for evening of June 3, 2004 – Check list

\*\* DAQ, Scalers & Anapaw must be working before 3:00 pm  
Magnetic settings from Lisa++ calculations – Mocko  
Optics – Aoi

Beam: 86Kr

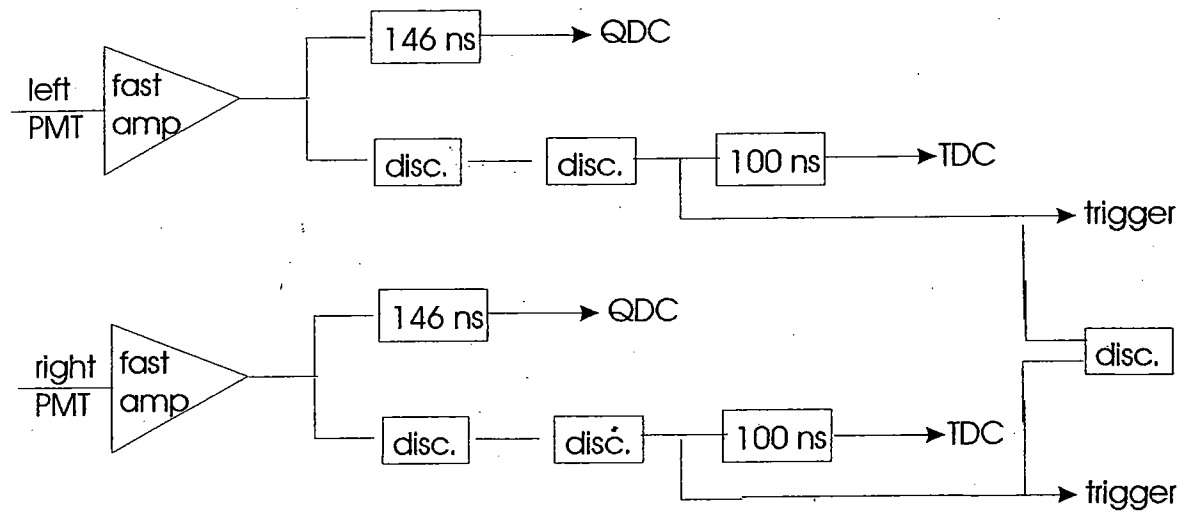
1. Beam tune (viewer etc) – before 9:00 pm; Aoi, Andreas
2. Target : Be (0.5 mm = 92 mg/cm<sup>2</sup>)
3. Monitors (scalars must work):
  - a. Momota -- Nobu
  - b. Okuna -- Nobu
  - c. NaI -- Mocko
  - d. BaF -- Mocko
4. F1
  - a. Beam tuning -- Aoi
  - b. PPAC -- Anapaw -- Nobu
5. F2
  - a. Slit settings & beam tuning -- Aoi
  - b. F2\_PPAC -- Nobu
  - c. F2\_scintillator -- Nobu
  - d. F2\_Si -- Nobu
  - e. F2-RF -- Nobu
6. F3
  - a. Slit settings & beam tuning -- Aoi
  - b. F3\_PPAC -- Nobu
  - c. F3\_scintillator -- Nobu
  - d. Si-Stack (DE<sub>H</sub>, DE<sub>L</sub>, E1, E2, E3, E4) Mocko, Lynch
  - e. spectra – Dinh
    - i. 1D spectra
    - ii. DE<sub>L</sub> vs. E<sub>sum</sub>(=DE<sub>L</sub>+ E1+ E2+ E3+E4)
    - iii. DE<sub>H</sub> vs. E<sub>sum</sub>(=DE<sub>L</sub>+ E1+ E2+ E3+E4)
  - f. F3-RF -- Nobu
7. General:
  - a. Triggers – What triggers to use, F2/F3,...
  - b. DAQ rates – Onishi, Dinh, verify buffers are o.k.
  - c. Scalers – Onishi, Dinh
  - d. F2/F3 to check transmission – Nobu, Stolz
8. PID :
  - a. F2-F3 -- Nobu
  - b. DE<sub>L</sub> vs. TOF; DE<sub>H</sub> vs. TOF – Dinh
  - c. DE<sub>L</sub> vs. F3\_PPAC\_X2; DE<sub>H</sub> vs. F3\_PPAC\_X2 -- Dinh

6/2/2004

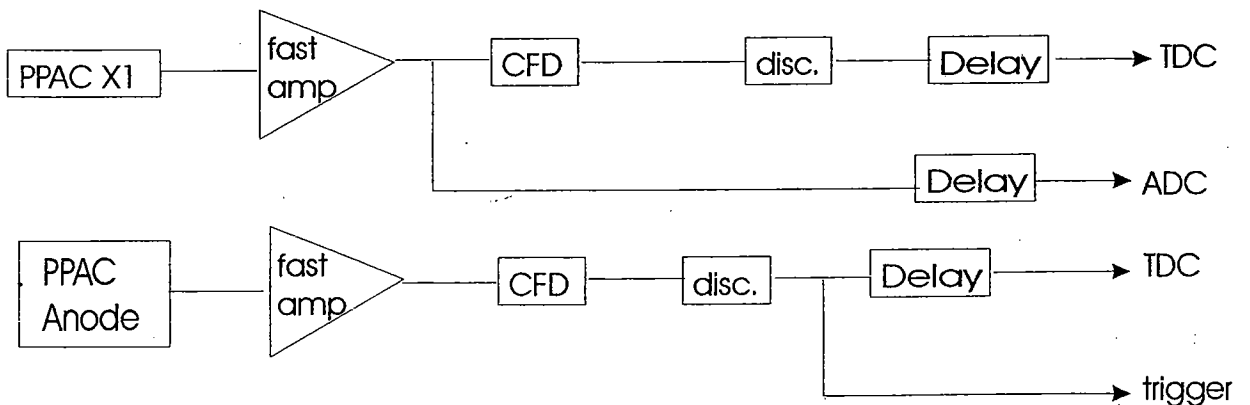
we set CFD thresholds for NaI and BaF  
to be: -300 mV for NaI channels

we changed the Fast Amp to be non-inverting so we are  
able to use RIT for NaI and BaF and Si

## plastic electronics



## PPAC electronics



## Main procedure

◆◆ If you want to make a non recorded acquisition :

Command> nssta

◆◆ If you want to make a recorded acquisition :

Command> mount

Mount physically the tape on hardware.

Command> mton

Mount the tape, case of software

Command> wth

Header :

-> " Bonjour ceci est une acquisition "

Command> start

...And wait for you data...

Command> stop

Ender :

-> " Ceci etait une acquisition "

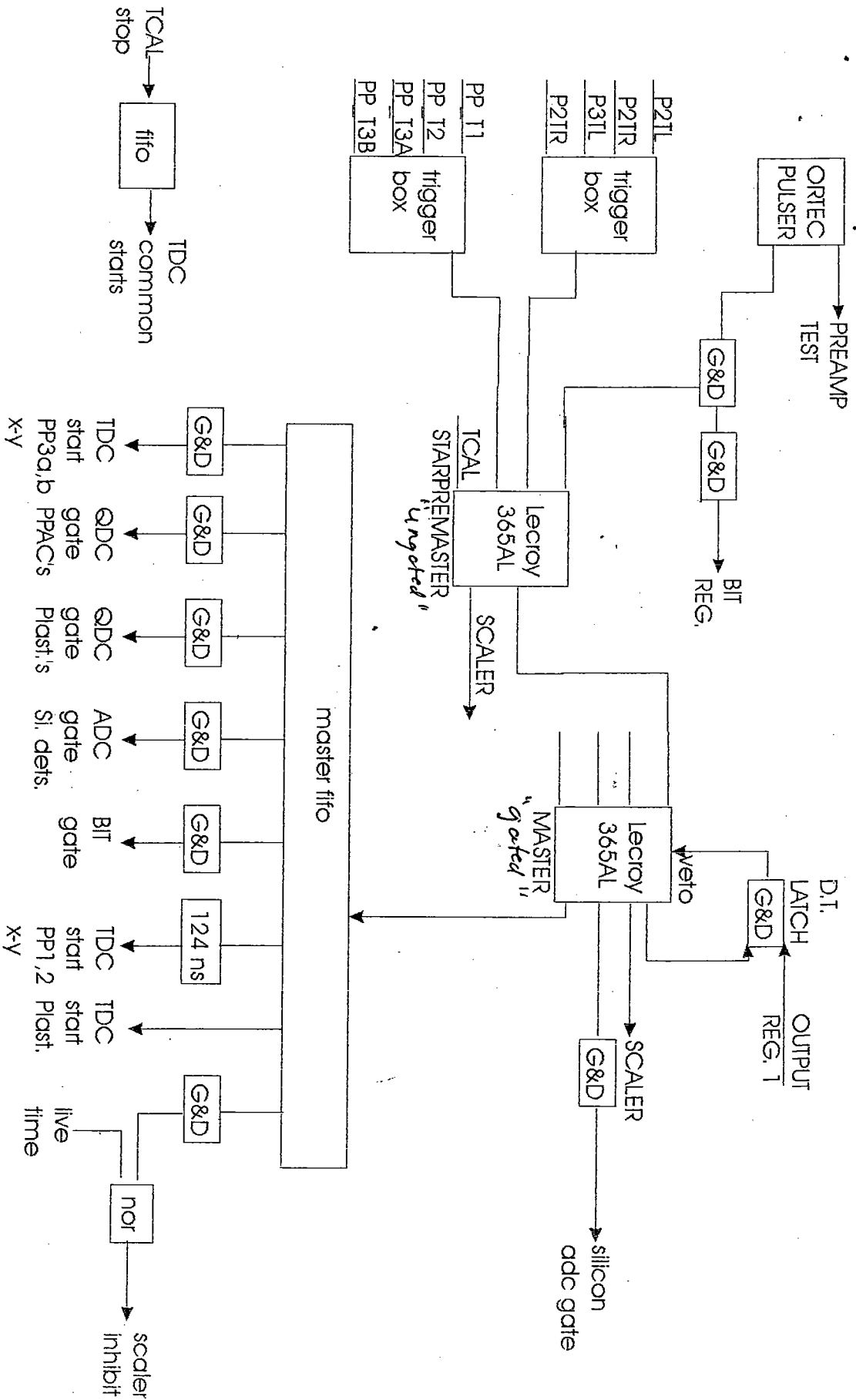
Stop the acquisition and write the ender

Command> prisca

...and don't forget to print the scaler values ! After that you can restart another acquisition.  
If you want to change the tape.

Command> mtoff

Command> dismou



## DAQ Computer Reboot/Startup:

Login: rips Pass: obakiller

1. Starting bbcamac.
  - a. Change to the 2<sup>nd</sup> console by pressing **alt+F2** and login. You should now be logged onto ripsdaq1.
  - b. We now want to ssh into ripsdaq2 and login.
  - c. **cd /home/rips/exp/86Kr**
  - d. Type **bbcamac**. The camac readout is now started.
2. Starting babarl.
  - a. Change back to the 1<sup>st</sup> console by pressing **alt-F1** and login. You should now be logged onto ripsdaq1.
  - b. **cd /home/rips/exp/86Kr**
  - c. Type **babarl**. The data acquisition is now started.

## Starting the Scalar Readout:

1. Change to the 3<sup>rd</sup> console by pressing **alt-F3** and login. You should now be logged onto ripsdaq1.
2. We now want to ssh into ripsdaq3 and login (This is necessary to run the scalar readout).
3. **cd /home/rips/tmp/**
4. Type **./bbsca**. The scalar readout should now be started.

To copy scaler files:

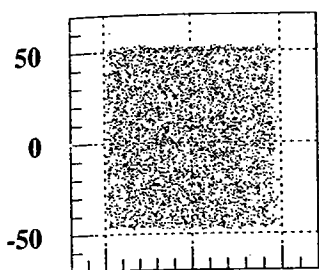
At end of run, at the DAQ terminal (Alt F1)  
stop – stop run  
prisca – print scaler files on printer

Alt F3 (switch to another terminal in daq2)  
cd sca – (go to sca subdirectory)  
prisca > r#.txt  
Alt F1 (back to DAQ terminal)

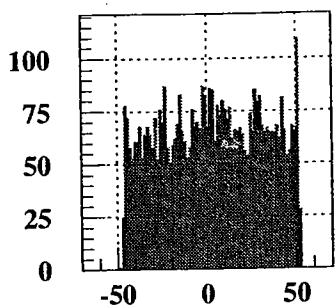
Go to another computer  
ssh to ripsdaq3 172.27.213.229  
from ripsdaq3 ssh to ripsdaq2  
cd sca  
scp r#.txt ripsdaq3:/home/rips/exp/86Kr/sca/ -- copy file  
cp r#.txt to your pc and use excel to open the file.

6/3

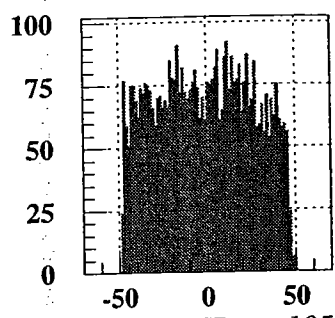
8:00



Histogram ID = 103  
F3aPPAC  $\mu\mu$



Histogram ID = 106  
Proj.(F3aPPAC  $\mu\mu$ )



Histogram ID = 105  
Prox.(F3aPPAC  $\mu\mu$ )

Signal check of F3aPPAC w/  $\alpha$  - source.

HV = 806 V

run 1006. rdtf

F3aPPAC check w/  $\alpha$ -source.

### Run Procedure

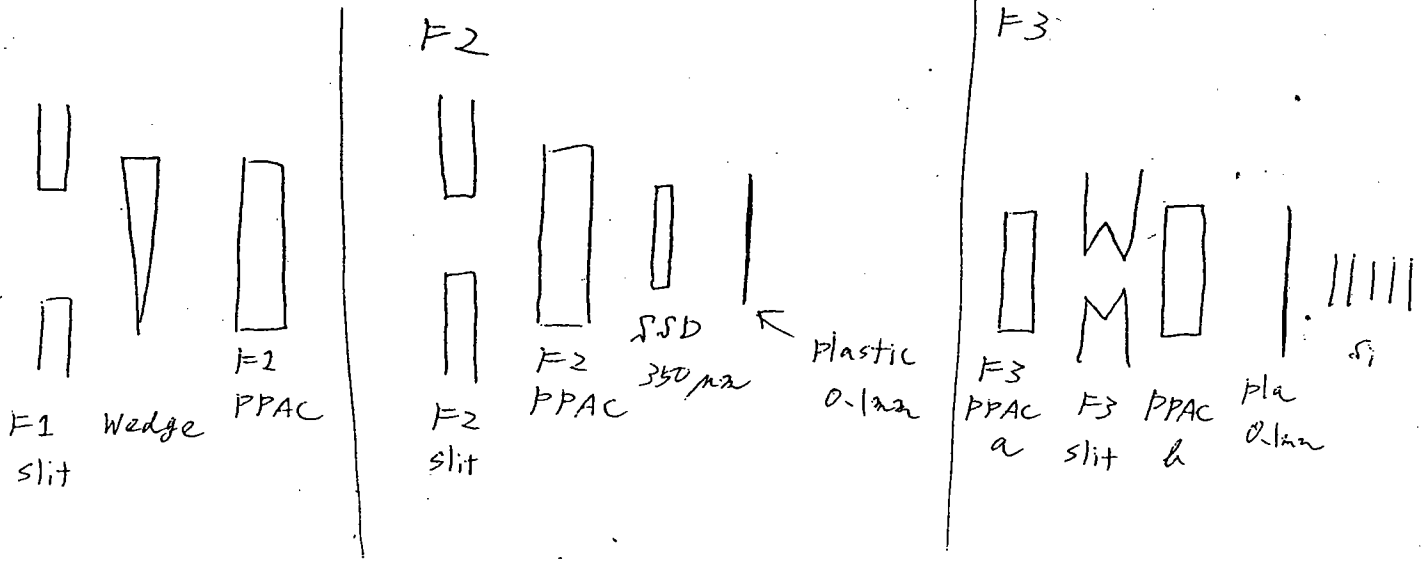
#### Start Run

- Fill out run sheets
- Print out RIPS control sheet

#### Stop Run

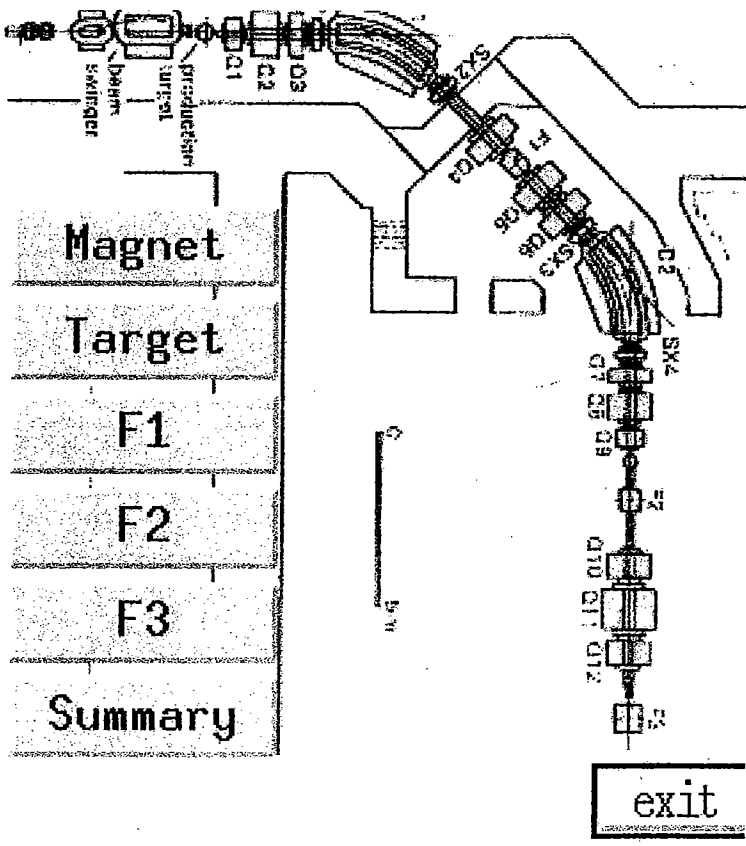
- Print scaler file
- Save scaler file

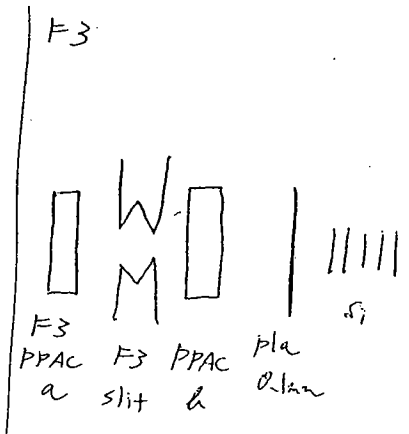
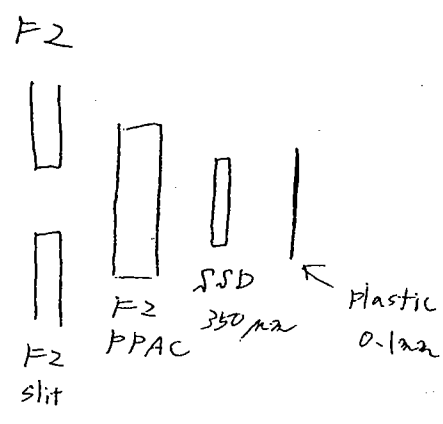
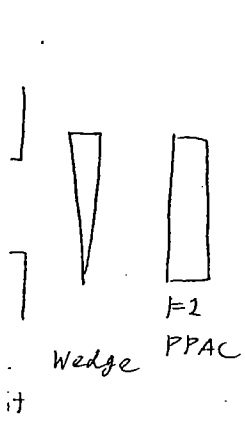
Please log down all the detector voltages every 4 hr.  
Compare with previous values and note if there are any significant changes in voltages or currents



r\_cont.ad

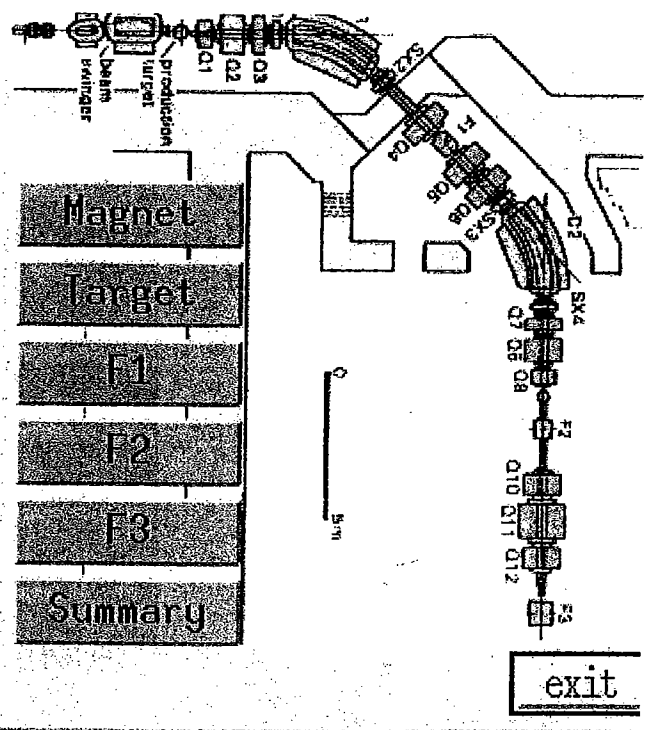
# RIPS Control



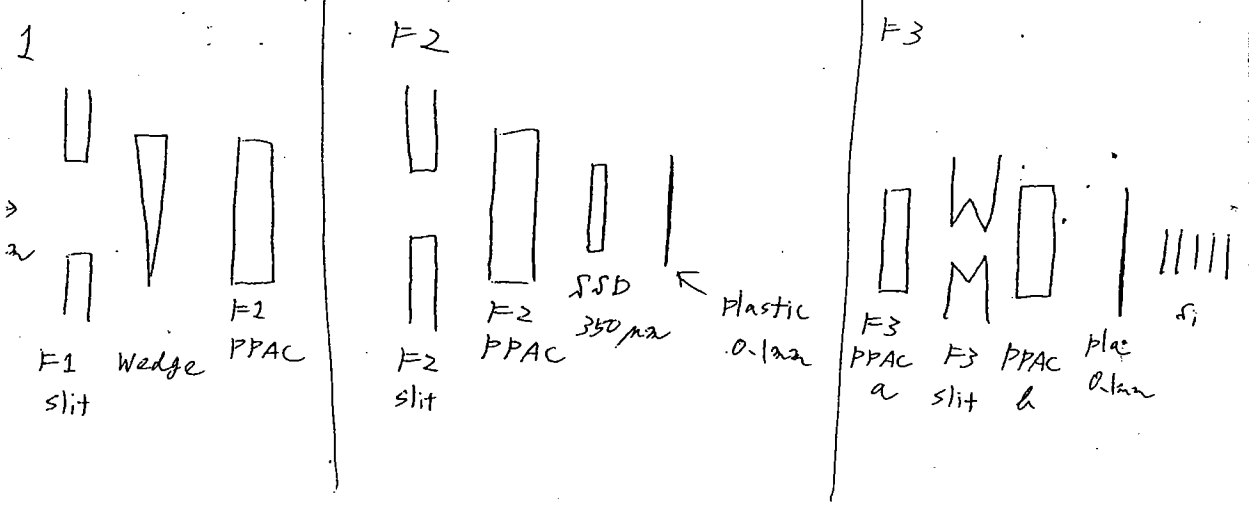


r\_cont.ad

# RIPS Control



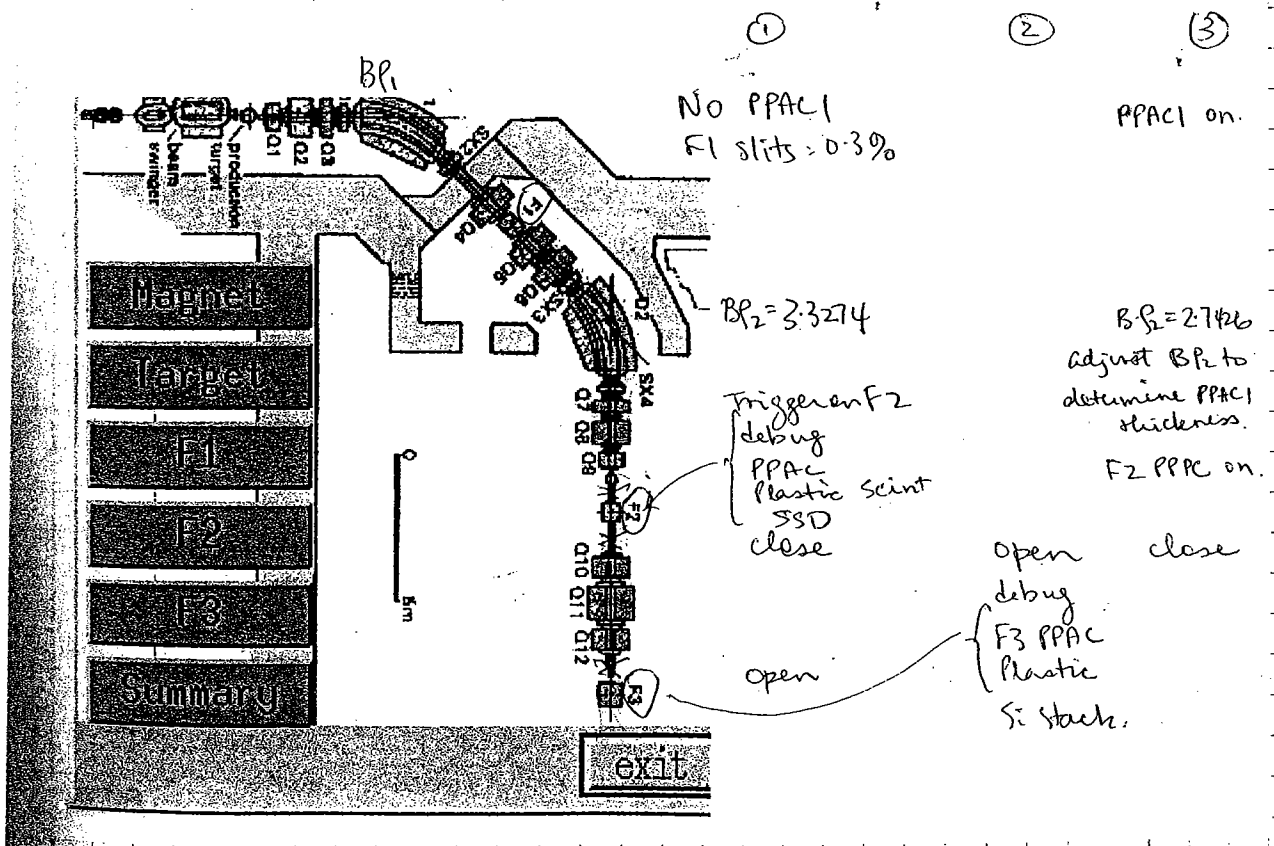




Xir\_cont.ad

# RIPS Control

No target 86 Kr 30+  $BP_1 = 33274$



1 plan for Jun 3 evening debugging of electronics and setting delays, triggers and

Q:

1. check the beam spot at the target position so we are approximately centered (more thorough check will be done in the morning)
2. Set Brho1=Brho2= 3.3274Tm
  - a. Detectors: F2 SSD, F2 PPAC, F2 scintillator with closed gate valve so we don't destroy our Si stack.
3. Set Brho1=3.3274Tm and Brho2= 2.7426Tm
  - a. Setting with no target and all detectors
  - b. With F1, F2, F3 PPACs in and F2, F3 scintillators and Si stack. We would put the F2 SSD in only to check the gains
  - c. We have to use narrow slit opening (like 0.3% to restrict ourselves to one charge state)
4. check gains on our Si detectors first.
  - a. Energy losses in Si stack according to energy loss calculation: dE=883, E1=1536, E2=2538, E3=325, E4=0; everything calculated for Brho=2.74Tm

name:	Energy [MeV]	channel:	range
F2SSD	662	1084	2500
dE_high	883	3616.768	1000
dE_low	883	1446.707	2500
E1	1531	2090.325	3000
E2	2538	3465.216	3000
E3	325	443.7333	3000
E4	0	0	3000

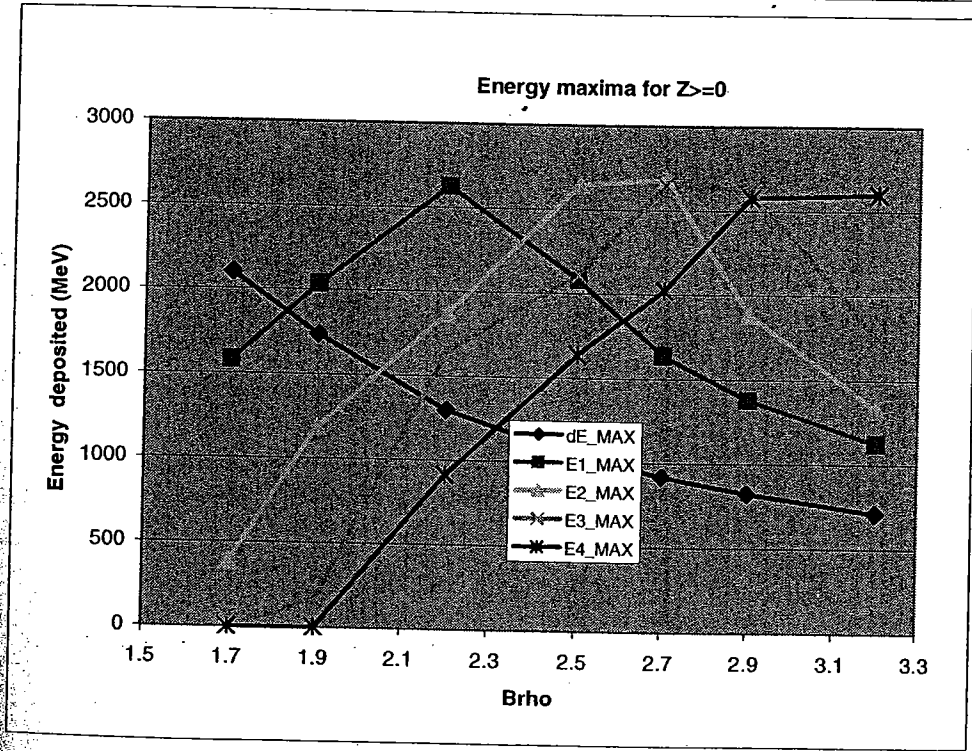
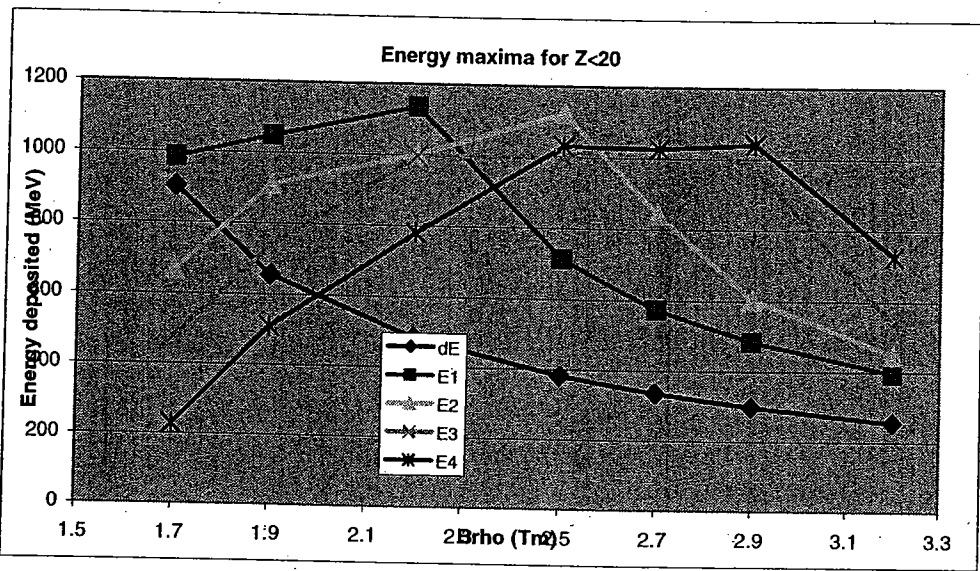
← for Brho=3.32!!

} 2.74 Tm

name:	Energy [MeV]	channel:	range
F2SSD	662	1084.621	2500
dE_high	661	2707.456	1000
dE_low	661	1082.982	2500
E1	1029	1404.928	3000
E2	1174	1602.901	3000
E3	1421	1940.139	3000
E4	2039	2783.915	3000

} for Brho=3.32!!

- b.
- c. Put F2 SSD in beam and adjust gain accordingly
5. Target: Be(92)
  - a. Brho1=2.000Tm, Brho2=2.000Tm
  - b. N=Z line setting, allowing us to check all detectors, adjust thresholds and timings
  - c. Make sure the DAQ is running reliably and that we have all the spectra defined in ANAPAW
6. F1 slit: 4.8mm ⇔ 0.2% acceptance



6/3/2004

10:30 PM we have unshipped primary beam @ F2 place

$$R_{p1} = R_{p2} = 3.3274 \text{ Tm}$$

Radius = 3.6 m

Read: 928.888  $\mu\text{T}$   
924.276  $\mu\text{T}$

Si 6/3/04 23:50 pm.

Si Area Resistor 2 MJD

U dE-	95 V	I dE-	0.14 $\mu\text{A}$
U E1-	95	I E1-	0.06 $\mu\text{A}$
U E2-	95	I E2-	0.13 $\mu\text{A}$
U E3-	95	I E3-	0.09 $\mu\text{A}$
U E4-	95	I E4-	0.19 $\mu\text{A}$
F1 PPAC-	-715 V	NaI(Tl) 1-	900 V
F2 PPAC-	-752 V	NaI(Tl) 2-	
F3 PPAC1-	-756 V	NaI(Tl) 3-	
F3 PPAC2-	-756	BaF	-1500 V.

Run 2

RIPS Control Summary				2004/06/04 00:15:21	
Q#	Parameter	Set Curr.	Read Curr.	Target	PS
Q1	1.3167	217.3213	217.508	Tgt 0.0 mm	FC Out
Q2	1.5337	173.0914	170.984	FC Out	Rgt 50.0
Q3	0.7725	164.2790	164.573	Up 24.0 mm	Lft 50.0
SX1	0.0000	0.1469	0.000	Down 24.0 mm	PPAC Out
D1	0.2777	515.4045	519.508	Ret 24.0 mm	SSD -94.5
SX2	0.0000	0.1469	0.000	Lft 23.8 mm	Deg Out
Q4	0.5572	90.2643	90.192	Lft	Pla Out
Q5	0.7942	112.7735	113.016		
Q6	0.6197	100.5679	100.663		
SX3	0.0000	0.1469	0.000		
Q2	0.2777	535.664	535.445	F1	F3
SX4	0.0000	0.1469	0.079	D1 119.8 mm	PPAC1 Out
Q7	0.6468	137.5267	138.974	Id -135.1 mm	Rgt 49.9
Q8	1.1259	143.308	143.797	Rgt 72.6 mm	Lft 50.0
Q9	1.0222	168.488	168.811	Lft 72.0 mm	PPAC2 Out
Q10	1.1110	192.937	195.437	Mon Out	SSD Out
Q11	1.4205	211.497	209.245	Deg Exp	Pla In
Q12	1.1106	192.867	194.547	PPAC Out	Lft
Focus	Brho	TA-F1 3.3274	Tm	Rot 0	deg.
F1-F2 3.3274	Tm	F2-F3 3.3274	Tm	[update]	

exit

$BP_1 = BP_2 = 3.3274$  Tape #1

Run number:	2	Name:	Nobu
Description:	for SSD <del>is</del> stack calibration		
Date:	Jun / 4 3	Time:	23:56
Brho1:	923.890	Brho2:	924.373
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U dB-	I dB-
	I E1-
	I E2-
	I E3-
	I E4-
6:04.04.0:03	prisca
Run2	NaI(Tl) 1=
Start -- Thu Jun 3 23:56:20 2004	NaI(Tl) 2=
Stop -- Fri Jun 4 00:02:56 2004	NaI(Tl) 3=
Scaler Name : Total	

```

Run2
Start -- Thu Jun 3 23:56:20 2004
Stop -- Fri Jun 4 00:02:56 2004

Scaler Name : Total
UNGATED : 14042
GATED : 13977
NONE : 220
F1PP T : 13
F2 SI : 0
CLEARS : 13421
F2PP T : 88
F3PPA T : 69
E1 : 13966
PL 2 : 0
PL 3 : 14019
CLOCK : 395269
TGT NAI : 441
TGT BAF : 116
MOMOTA : 9708788
OKUNO : 0
FC : 3341
MOMOTA1 : 25187675
MOMOTA2 : 32824218
MOMOTA3 : 29112386
OKUNO1 : 0
OKUNO2 : 0
OKUNO3 : 0
F3PPB T : 26
LIVE TGT NAI : 239
LIVE TGT BAF : 115
LIVE MOMOTA : 9574089
LIVE OKUNO : 0
LIVE FC : 3304
LIVE MOMOTA1 : 24841551
LIVE MOMOTA2 : 32368693
LIVE MOMOTA3 : 28775153
LIVE OKUNO1 : 0
LIVE OKUNO2 : 0
LIVE OKUNO3 : 0
NONE : 0
  
```

6/4/04

00: am:

Finish checking PPAC1; F2PPAC, F2 SSD, F2 plastic,  
F3 PPAC, F3 SSD, F3 plastic  
→ rough calibration of all SSD's

00: -

am.  
Set to N=7 fragments & debug  
No F1PPAC, No wedge, F1 slit

6/04/04 1:43 a.m. Corrected voltages for bias resistor (2M $\Omega$ )

U dB=	95.6 V	I dB=	0.14 $\mu$ A
U E1=	95.3	I E1=	0.07
U E2=	95.5	I E2=	0.13
U E3=	95.4	I E3=	0.09
U E4=	95.8	I E4=	0.20
F1 PPAC=	-750 V	NaI(Tl) 1=	810 V
F2 PPAC=	-752	NaI(Tl) 2=	
F3 PPAC1=	-756	NaI(Tl) 3=	
F3 PPAC2=	-756		

F1 PPAC Trig

EV (F2 Down) Close

Run number:	3	Name:	
Description:	86Kr + Ta A-state 36+ & 35+		
Date:	6/4	Time:	06:39:25
Brho1:	1707.243	Brho2:	
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	Full
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open	F1 PPAC	IN
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U dE=		I dE=	
U E1=		I E1=	
U E2=		I E2=	
U E3=		I E3=	
U E4=		I E4=	
F1 PPAC=	750	NaI(Tl) 1=	
F2 PPAC=		NaI(Tl) 2=	
F3 PPAC1=		NaI(Tl) 3=	
F3 PPAC2=			

6:04, 04:6:45

prisca

Run3

Start -- Fri Jun 4 06:39:25 2004  
Stop -- Fri Jun 4 06:45:33 2004

Scaler Name : Total

UNGATED :	1070899
GATED :	961637
NONE :	7938
F1PP T :	1071099
F2 SI :	0
CLEARs :	484219
F2PP T :	49
F3PPA T :	60
E1 :	4
PL 2 :	10
PL 3 :	3
CLOCK :	367270
TGT NAI :	303
TGT BAF :	1172
MOMOTA :	8468339
OKUNO :	0
FC :	3184
MOMOTA1 :	23622678
MOMOTA2 :	29863175
MOMOTA3 :	26719704
OKUNO1 :	57
OKUNO2 :	1
OKUNO3 :	51
F3PPB T :	27
LIVE TGT NAI :	274
LIVE TGT BAF :	1048
LIVE MOMOTA :	7704359
LIVE OKUNO :	0
LIVE FC :	2882
LIVE MOMOTA1 :	21495109
LIVE MOMOTA2 :	27173472
LIVE MOMOTA3 :	24357120
LIVE OKUNO1 :	51
LIVE OKUNO2 :	1
LIVE OKUNO3 :	47
NONE :	0



34+, 35+

Run number:	4	Name:	L.I
Description:	F1PPAC trig, <del>33+, 34+</del> charge-state distri		
Date:	8/4	Time:	6:55-
Brho1:	733,023	Brho2:	(693.065-)
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U A1-		I A1-	
U E1-		I E1-	
U E2-		I E2-	
U E3-		I E3-	
U E4-		I E4-	
F1 PPAC=	~750	NaI(Tl) 1=	
F2 PPAC=		NaI(Tl) 2=	
F3 PPAC1=		NaI(Tl) 3=	
F3 PPAC2=			

Start comment of Run 4  
 should be 35+, 34+ run  
 instead of 34+, 33+ run written in the DATA

Run4

Start -- Fri Jun 4 06:51:55 2004  
Stop -- Fri Jun 4 07:03:26 2004

Scaler Name : Total

UNGATED :	2389617
GATED :	2118784
NONE :	16262
FIPP T :	2390089
F2 SI :	0
CLEARs :	991983
F2PP T :	93
F3PPA T :	146
E1 :	9
PL 2 :	1
PL 3 :	2
CLOCK :	689739
TGT NAI :	523
TGT BAF :	1990
MOMOTA :	15853433
OKUNO :	1
FC :	5828
MOMOTA1 :	44480721
MOMOTA2 :	56148796
MOMOTA3 :	50136513
OKUNO1 :	97
OKUNO2 :	5
OKUNO3 :	63
F3PPB T :	50
LIVE TGT NAI :	463
LIVE TGT BAF :	1774
LIVE MOMOTA :	14172931
LIVE OKUNO :	1
LIVE FC :	5235
LIVE MOMOTA1 :	39769612
LIVE MOMOTA2 :	50208653
LIVE MOMOTA3 :	44913566
LIVE OKUNO1 :	88
LIVE OKUNO2 :	5
LIVE OKUNO3 :	56
NONE :	0

Run number:	5	Name:	
Description:	33+, 34+		
Date:	6/4	Time:	7-20
Brho1:	<del>754</del> 751 638	Brho2:	
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U dE=		I dE=	
U E1=		I E1=	
U E2=		I E2=	
U E3=		I E3=	
U E4=		I E4=	
F1 PPAC=		NaI(Tl) 1=	
F2 PPAC=		NaI(Tl) 2=	

6/04/04 7:19 prisca

Run5

Start -- Fri Jun 4 07:13:46 2004  
 Stop -- Fri Jun 4 07:18:57 2004

Scaler Name : Total

```

UNGATED : 424015
GATED : 403020
NONE : 4478
F1PP T : 424071
F2 SI : 0
CLEARS : 273159
F2PP T : 39
F3PPA T : 58
E1 : 5
E2 : 0
PL 2 : 0
PL 3 : 1
CLOCK : 310705
TGT_NAI : 263
TGT_BAF : 841
MONOT1 : 7122350
OKUNO : 0
FC : 2547
MONOT1 : 20039056
MONOT2 : 25231799
MONOT3 : 22593735
OKUNO1 : 39
OKUNO2 : 1
OKUNO3 : 26
F3PPB T : 28
LIVE_TGT_NAI : 247
LIVE_TGT_BAF : 804
LIVE_MONOT1 : 6801763
LIVE_OKUNO : 0
LIVE_FC : 2442
LIVE_MONOT1 : 19135644
LIVE_MONOT2 : 24098212
LIVE_MONOT3 : 21618044
LIVE_OKUNO1 : 35
LIVE_OKUNO2 : 1
LIVE_OKUNO3 : 25
LIVE_NONE : 0
  
```

Run number:	6	Name:	UZ.
Description:	32 <sup>+</sup> , 33 <sup>+</sup> charge-state distribution		
Date:	6/4	Time:	7:30
Brho1:	775.073	Brho2:	(692.986)
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U dB=	95.3	I dB=	0.15
U E1=	95.1	I E1=	0.09
U E2=	95.2	I E2=	0.27
U E3=	95.4	I E3=	0.20
U E4=	95.2	I E4=	0.15
F1 PPAC=	-750	NaI(Tl) 1=	0.81 <del>KT</del>
F2 PPAC=	-752	NaI(Tl) 2=	
F3 PPAC1=	-756	NaI(Tl) 3=	
F3 PPAC2=	-756		

Run6  
 Start -- Fri Jun 4 07:22:25 2004  
 Stop -- Fri Jun 4 07:28:45 2004

Scaler Name : Total

prisca

```

59567 UNGATED :
58707 GATED :
908 NONE :
59568 F1PP_T :
0 F2_SI :
55389 CLEARS :
51 F2PP_T :
73 F3PPA_T :
6 EI :
0 PL_2 :
0 PL_3 :
380084 CLOCK :
279 TGT_NAI :
1108 TGT_BAF :
8722919 MONOTA :
0 OKUNO :
2974 FC :
24500407 MOMOTA1 :
30836601 MOMOTA2 :
27612634 MOMOTA3 :
50 OKUNO1 :
2 OKUNO2 :
34 OKUNO3 :
45 F3PP_T :
276 LIVE_TGT_NAI :
1100 LIVE_TGT_BAF :
8675200 LIVE_MONOTA :
0 LIVE_OKUNO :
2959 LIVE_FC :
24367283 LIVE_MONOTA1 :
30673594 LIVE_MONOTA2 :
27512409 LIVE_MONOTA3 :
50 LIVE_OKUNO1 :
2 LIVE_OKUNO2 :
34 LIVE_OKUNO3 :
0 LIVE_NONE :

```

Run number:	7	Name:	Imai
Description:	charge distribution for $^{86}\text{Kr}^{32+}$		
Date:		Time:	
Brho1:	799.934	Brho2:	
Target:	<del>Be(92)</del>	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	$\pm 3\%$
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U dE=		I dE=	
U E1=		I E1=	
U E2=		I E2=	
U E3=		I E3=	
U E4=		I E4=	
F1 PPAC=		NaI(Tl) 1=	
F2 PPAC=		NaI(Tl) 2=	
F3 PPAC1=		NaI(Tl) 3=	
F3 PPAC2=			

prisca

Run7

Start -- Fri Jun 4 07:37:16 2004  
 Stop -- Fri Jun 4 07:45:02 2004

Scaler Name : Total

```

5592 UNGATED :
5525 GATED :
90 NONE :
5592 F1PP T :
0 F2 SI :
5491 CLEARS :
52 F2PP T :
81 F3PPA T :
2 EI :
1 PL 2 :
1 PL 3 :
3 CLOCK :
460156 TGT_NAI :
362 TGT_BAF :
1236 MOMOTA :
10526652 OKUNO :
0 FC :
3838 MOMOTA1 :
29573387 MOMOTA2 :
37220379 MOMOTA3 :
33365300 OKUNO1 :
64 OKUNO2 :
1 OKUNO3 :
45 F3PP T :
73 LIVE_TGT_NAI :
362 LIVE_TGT_BAF :
1235 LIVE_MOMOTA :
10522241 LIVE_OKUNO :
0 LIVE_FC :
3836 LIVE_MOMOTA1 :
29561108 LIVE_MOMOTA2 :
37210905 LIVE_MOMOTA3 :
33409079 LIVE_OKUNO1 :
64 LIVE_OKUNO2 :
1 LIVE_OKUNO3 :
45 NONE :
0

```

Run number:	8	Name:	Jmai
Description:	31 <sup>+</sup> /30 <sup>T</sup> measurement		
Date:		Time:	
Brho1:	821.027	Brho2:	
Target:	<del>Be(92)</del>	Ta(166)	<del>Be(115) Be(181)</del>
F1 slit:	<del>0.20%</del>	open	full
Wedge:	<del>N/A</del>	100mg/Al	<del>60mg/Al</del>
F2 slit:	open	only F1 PPAC	
F2PPAC:	IN OUT	F3PPACs:	<del>IN OUT</del>
F2 Scint:	<del>IN OUT</del>	F3 Scint:	<del>IN OUT</del>

U dE=	I dE=
U E1=	I E1=
U E2=	I E2=
U E3=	I E3=
U E4=	I E4=
F1 PPAC=	NaI(Tl) 1=
F2 PPAC=	NaI(Tl) 2=

6/04/04:07:55 prisca

```

Runs
Start -- Fri Jun 4 07:49:36 2004
Stop  -- Fri Jun 4 07:55:23 2004

Scaler Name : Total
UNGATED : 122
GATED : 122
NONE : 2
F1PP T : 122
F2 SI : 0
CLEARS : 123
F1PP T : 36
F3PPA T : 253
E1 : 1
E2 : 1
PL_2 : 0
PL_3 : 0
CLOCK : 200629
TGT_NAI : 179
TGT_BAF : 509
MOMTA : 4625872
OKUNO : 0
FC : 1721
MOMTAL : 13033375
MOMOTA2 : 16335016
MOMOTA3 : 14663487
OKUNO1 : 19
OKUNO2 : 1
OKUNO3 : 19
F3PP T : 518
LIVE_TGT_NAI : 179
LIVE_TGT_BAF : 509
LIVE_MOMOTA : 4625778
LIVE_OKUNO : 0
LIVE_FC : 1721
LIVE_MOMTAL : 13033118
LIVE_MOMOTA2 : 16337524
LIVE_MOMOTA3 : 14693057
LIVE_OKUNO1 : 19
LIVE_OKUNO2 : 1
LIVE_OKUNO3 : 19
LIVE_NONE : 0

```

Run number:	9	Name:	UZ
Description:	30 <sup>+</sup> /31 <sup>+</sup> measurement, increase primary beam intens. by x1000		
Date:	6/6	Time:	8:05
Brho1:	82/1.038	Brho2:	
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U dE-		I dE-	
U E1-		I E1-	
U E2-		I E2-	
U E3-		I E3-	
U E4-		I E4-	
F1 PPAC=		NaI(Tl) 1=	
F2 PPAC=		NaI(Tl) 2=	
F3 PPAC1=		NaI(Tl) 3=	
F3 PPAC2=			

Run9  
6:04:04.801  
prisca

Start -- Fri Jun 4 07:58:31 2004  
Stop -- Fri Jun 4 08:01:27 2004

Scaler Name : Total

```

UNGATED : 33978
GATED : 33311
NONE : 510
F1PP T : 33978
F2 SI : 0
CLEARS : 31111
F2PP T : 15
F3PPA T : 36
E1 : 6
PL 2 : 1
PL 3 : 0
CLOCK : 175615
TGT_NAI : 8993
TGT_BAF : 443
MOMOTA : 4045147
OKUNO : 10
FC : 1532
MOMOT1 : 11402322
MOMOT2 : 14316283
MOMOT3 : 12850403
OKUNO1 : 187
OKUNO2 : 31
OKUNO3 : 29
F3PP T : 48
LIVE_TGT_NAI : 8838
LIVE_TGT_BAF : 437
LIVE_MOMOTA : 4018342
LIVE_OKUNO : 10
LIVE_FC : 1523
LIVE_MOMOT1 : 11326695
LIVE_MOMOT2 : 14223761
LIVE_MOMOT3 : 12792338
LIVE_OKUNO1 : 187
LIVE_OKUNO2 : 31
LIVE_OKUNO3 : 29
LIVE_NONE : 0
    
```

Run number:	10	Name:	
Description:	Be 0.625 mm <sup>e</sup> thickness		
Date:	8-23	Time:	6/4
Brho1:	669,522	Brho2:	(670,446)
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U E1		I E1	
U E2		I E2	
U E3		I E3	
U E4		I E4	
F1 PPAC		NaI(Tl) 1	
F2 PPAC		NaI(Tl) 2	
F3 PPAC1		NaI(Tl) 3	
F3 PPAC2			

prisa

6:04:04.8:20  
Run10  
Start -- Fri Jun 4 08:18:17 2004  
Stop -- Fri Jun 4 08:20:06 2004  
Scaler Name : Total

UNGATED :	284435
GATED :	259099
NONE :	2262
F1PP T :	284470
F2_S1 :	0
CLEAR :	137983
F2PP T :	9
F3PPA T :	23
E1 :	4
PL_2 :	1
PL_3 :	1
CLOCK :	108600
TGT_NAI :	82
TGT_BAF :	342
MOMOTA :	2492402
OKUNO :	0
FC :	961
MOMOT1 :	7041599
MOMOT2 :	8816443
MOMOT3 :	7914084
OKUNO1 :	12
OKUNO2 :	0
OKUNO3 :	11
F3PP T :	5
LIVE_TGT_NAI :	72
LIVE_TGT_BAF :	315
LIVE_MOMOTA :	2286737
LIVE_OKUNO :	0
LIVE_FC :	88
LIVE_MOMOT1 :	6461443
LIVE_MOMOT2 :	8090186
LIVE_MOMOT3 :	7277663
LIVE_OKUNO1 :	12
LIVE_OKUNO2 :	0
LIVE_OKUNO3 :	11
LIVE_NONE :	0

last minute  
before stopping  
data taking,  
we changed  
F1 output  
Please use the  
first half of  
data in the



Run number:	11	Name:	
Description:	Be 0.625mm aft fine tuning		
Date:		Time:	
Brho1:	669.444	Brho2:	
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U E1=		I E1=	
U E2=		I E2=	
U E3=		I E3=	
U E4=		I E4=	
F1 PPAC=		NaI(Tl) 1=	
F2 PPAC=		NaI(Tl) 2=	
F3 PPAC1=		NaI(Tl) 3=	
F3 PPAC2=			

6/10/04 04:8:26 prisca

Run11  
 Start -- Fri Jun 4 08:25:13 2004  
 Stop -- Fri Jun 4 08:26:12 2004

Scaler Name : Total

```

UNGATED : 183125
GATED : 163590
NONE : 1322
F1PP T : 183174
F2 SI : 0
CLEARS : 80643
F2PP T : 8
F3PPA T : 12
E1 : 1
PL_2 : 0
PL_3 : 0
CLOCK : 58848
TGT_NAI : 66
TGT_BAF : 183
MOMOTA : 135324
OKUNO : 0
FC : 500
MOMOT1 : 3830756
MOMOT2 : 4795453
MOMOT3 : 4299835
OKUNO1 : 6
OKUNO2 : 0
OKUNO3 : 8
F3PP T : 6
LIVE_TGT_NAI : 61
LIVE_TGT_BAF : 161
LIVE_MOMOTA : 1224339
LIVE_FC : 0
LIVE_MOMOT1 : 454
LIVE_MOMOT2 : 3463144
LIVE_MOMOT3 : 4337255
LIVE_OKUNO1 : 3896807
LIVE_OKUNO2 : 5
LIVE_OKUNO3 : 0
NONE : 0
  
```

*Handwritten notes:*  $36^{+}/35^{+}$  Be Ta  $\sqrt{1/m_2^2}$

Run number:	12	Name:	
Description:	Run 12	$36^{+}/35^{+}$ Be Ta	$\sqrt{1/m_2^2}$
Date:	6	Time:	
Brho1:	590.910mT	Brho2:	
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U 4E=		I 4E=	
U E1=		I E1=	
U E2=		I E2=	
U E3=		I E3=	
U E4=		I E4=	
F1 PPAC=		Nal(TI) 1=	
F2 PPAC=		Nal(TI) 2=	
F3 PPAC1=		Nal(TI) 3=	
F3 PPAC2=			

04:04:04 8:42 prisca

Run12

Start -- Fri Jun 4 08:38:07 2004

Stop -- Fri Jun 4 08:41:55 2004

Scaler Name : Total

```

UNGATED : 597239
GATED : 463798
NONE : 4340
F1PP T : 597313
F2 SI : 0
CLEARS : 264741
F2PP T : 39
F3PPA T : 40
E1 : 4
PL 2 : 0
PL 3 : 3
CLOCK : 226615
TGT_NAI : 222
TGT_BAF : 801
MONOTA : 5199155
OKUNO : 0
FC : 1821
MOMOTA1 : 14711730
MOMOTA2 : 18406342
MOMOTA3 : 16521501
OKUNO1 : 29
OKUNO2 : 2
OKUNO3 : 29
F3PP T : 24
LIVE_TGT_NAI : 207
LIVE_TGT_BAF : 748
LIVE_MONOTA : 4831603
LIVE_OKUNO : 0
LIVE_FC : 1689
LIVE_MOMOTA1 : 13669522
LIVE_MOMOTA2 : 17106709
LIVE_MOMOTA3 : 15385516
LIVE_OKUNO1 : 26
LIVE_OKUNO2 : 1
LIVE_OKUNO3 : 27
NONE : 0
  
```

*thickness measurement*

Run number:	13	Name:	
Description:	Be TGT 0.5 mm tgt 36+		
Date:		Time:	
Brho1:	693.803 m	Brho2:	
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U dE=	I dE=
U E1=	I E1=
U E2=	I E2=
U E3=	I E3=
U E4=	I E4=
F1 PPAC=	NaI(Tl) 1=
F2 PPAC=	NaI(Tl) 2=

6:04:04.8:53 prisca

Run13  
 Start -- Fri Jun 4 08:50:52 2004  
 Stop -- Fri Jun 4 08:53:14 2004

Scaler Name : Total

```

  UNGATED : 344388
  GATED : 316233
  NONE : 2844
  F1PP T : 344446
  F2 SI : 0
  CLEARS : 173485
  F2PP T : 35
  F3PPA T : 33
  E1 : 0
  PL 2 : 1
  PL 3 : 0
  CLOCK : 141604
  TGT_NAI : 128
  TGT_BAF : 411
  MOMOTA : 3221673
  OKUNO : 0
  FC : 1095
  MOMOTA1 : 9111917
  MOMOTA2 : 11431741
  MOMOTA3 : 10273512
  OKUNO1 : 24
  OKUNO2 : 1
  OKUNO3 : 25
  F3PPB T : 33
  LIVE_TGT_NAI : 118
  LIVE_TGT_BAF : 371
  LIVE_MOMOTA : 2973815
  LIVE_OKUNO : 0
  LIVE_FC : 1008
  LIVE_MOMOTA1 : 8410319
  LIVE_MOMOTA2 : 10552961
  LIVE_MOMOTA3 : 9495868
  LIVE_OKUNO1 : 21
  LIVE_OKUNO2 : 1
  LIVE_OKUNO3 : 23
  NONE : 0
  
```

Run number:	14	Name:	
Description:	Be 0.5 min	36 <sup>+</sup> /35 <sup>+</sup>	
Date:		Time:	
Brho1:	704.850	Brho2:	
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U dE=		I dE=	
U E1=		I E1=	
U E2=		I E2=	
U E3=		I E3=	
U E4=		I E4=	
F1 PPAC=		NaI(Tl) 1=	
F2 PPAC=		NaI(Tl) 2=	
F3 PPAC1=		NaI(Tl) 3=	
F3 PPAC2=			

6/04/04 9:01 prisca

Run14

Start -- Fri Jun 4 08:57:47 2004

Stop -- Fri Jun 4 09:01:09 2004

Scaler Name : Total

```

UNGATED : 498149
GATED : 456711
NONE : 4078
F1PP_T : 498235
F2_S1 : 0
CLEARS : 248759
F2PP_T : 56
F3PPA_T : 39
E1 : 0
PL_2 : 0
PL_3 : 1
CLOCK : 200981
TGT_NAI : 160
TGT_BAF : 646
MOMTA : 4595953
OKUNO : 0
FC : 1566
MOMTAL : 13069710
MOMTAR : 16214463
MOMTAS : 14598496
OKUNO1 : 31
OKUNO2 : 2
OKUNO3 : 16
F3PPB_T : 35
LIVE_TGT_NAI : 153
LIVE_TGT_BAF : 597
LIVE_MOMTA : 4234326
LIVE_OKUNO : 0
LIVE_FC : 1456
LIVE_MOMTAL : 12041113
LIVE_MOMTAR : 14942651
LIVE_MOMTAS : 13477438
LIVE_OKUNO1 : 27
LIVE_OKUNO2 : 1
LIVE_OKUNO3 : 16
NONE : 0

```

Run number:	15	Name:	
Description:	Be 0.5mm 34+/35+		
Date:	2004/6/4	Time:	09
Brho1:	724-119mT	Brho2:	
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U DE=		I DE=	
U E1=		I E1=	
U E2=		I E2=	
U E3=		I E3=	
U E4=		I E4=	
F1 PPAC=		NaI(Tl) 1=	
F2 PPAC=		NaI(Tl) 2=	
F3 PPAC1=		NaI(Tl) 3=	
F3 PPAC2=			

6/04/04 9:08 prisca

Run15  
 Start -- Fri Jun 4 09:06:18 2004  
 Stop -- Fri Jun 4 09:08:07 2004  
 Scaler Name : Total

```

UNGATED : 29981
GATED : 29576
NONE : 442
F1PP T : 29982
F2_S1 : 0
CLEARS : 26963
F2PP T : 10
F3PPA_T : 18
E1 : 1
E2 : 1
PL_2 : 0
PL_3 : 108456
CLOCK : 108
TGT_NAI : 108
TGT_BAF : 328
MOMOTA : 252590
OKUNO : 0
FC : 881
MOMOTA1 : 7120771
MOMOTA2 : 8825348
MOMOTA3 : 7985425
OKUNO1 : 11
OKUNO2 : 0
OKUNO3 : 6
F3PPB T : 8
LIVE_TGT_NAI : 104
LIVE_TGT_BAF : 324
LIVE_MOMOTA : 2501407
LIVE_OKUNO : 0
LIVE_FC : 877
LIVE_MOMOTA1 : 7053067
LIVE_MOMOTA2 : 8742218
LIVE_MOMOTA3 : 7906284
LIVE_OKUNO1 : 11
LIVE_OKUNO2 : 0
LIVE_OKUNO3 : 6
NONE : 0
  
```

Run number:	16	Name:	
Description:	Be 0.5mm 33+/34+		
Date:	2004/6/04	Time:	0913:30
Brho1:	745.640	Brho2:	(746.224)
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U dE-		I dE-	
U E1-		I E1-	
U E2-		I E2-	
U E3-		I E3-	
U E4-		I E4-	
F1 PPAC=		NaI(Tl) 1=	
F2 PPAC=		NaI(Tl) 2=	
F3 PPAC1=		NaI(Tl) 3=	
F3 PPAC2=			

6/04/04 9:18 prisca

```

Run16
Start -- Fri Jun 4 09:13:30 2004
Stop  -- Fri Jun 4 09:18:26 2004

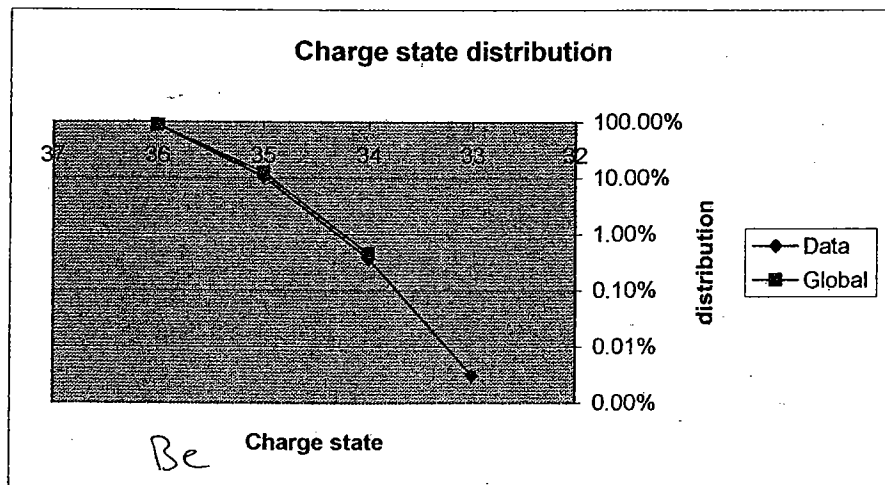
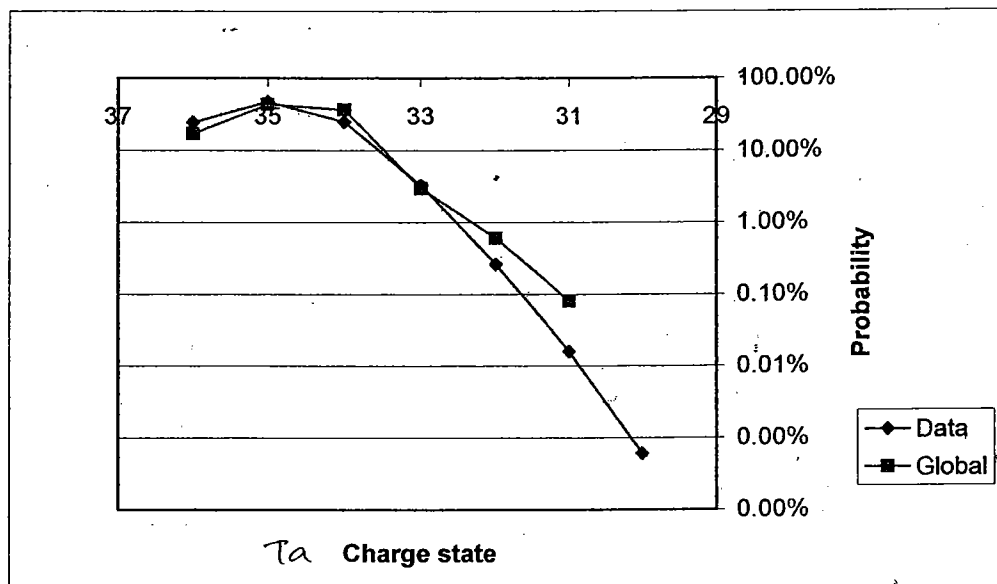
Scaler Name : Total
UNGATED : 131196
GATED : 128420
NONE : 1736
F1PP T : 131198
F2_S1 : 0
CLEARS : 105897
F2PP T : 33
F3PPA T : 47
E1 : 3
PL_2 : 0
PL_3 : 2
CLOCK : 224105
TGT_NAI : 3227
TGT_BAF : 652
MOMOTA : 5172409
OKUNO : 0
FC : 1821
MOMOTAL : 14686955
MOMOTA2 : 18164106
MOMOTA3 : 16393331
OKUNO1 : 44
OKUNO2 : 3
OKUNO3 : 27
F3PEB T : 17
LIVE_TGT_NAI : 3162
LIVE_TGT_BAF : 636
LIVE_MOMOTA : 5068957
LIVE_OKUNO : 0
LIVE_FC : 1785
LIVE_MOMOTAL : 14395047
LIVE_MOMOTA2 : 17804839
LIVE_MOMOTA3 : 16100029
LIVE_OKUNO1 : 44
LIVE_OKUNO2 : 3
LIVE_OKUNO3 : 26
NONE : 0

```

# Attenuator

$\begin{matrix} \text{Linac} & 1/10 & \times & 1/3 & \times & 1/2 \\ \text{RRC} & 1/2 & 1/3 & 1/10 & 1/100 \\ \text{All but} & 1/100 & (\text{at linac}) \end{matrix}$

Thickness of Ta  $153 \text{ mg/cm}^2$   
 Be  $95 \text{ mg/cm}^2$



Run number:	17	Name:	
Description:	F1 PPAC thickness		
Date:	6/4	Time:	9:56
Brho1:	694.053	Brho2:	694.788
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	0.20%	open	
Wedge:	N/A	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT

U dE-	95.3 V	I dE-	0.15 $\mu$ A
U E1-	95.1	I E1-	0.10
U E2-	95.2	I E2-	0.26
U E3-	95.4	I E3-	0.20
U E4-	95.2	I E4-	0.15
F1 PPAC=	-750	NaI(Tl) 1=	0.81 $\mu$ V
F2 PPAC=	-752	NaI(Tl) 2=	
F3 PPAC1=	-756	NaI(Tl) 3=	
F3 PPAC2=	-756	Ba F	1503

F2 SSO

95

Scaler Name	Total
UNGATED	471763
GATED	426953
NONE	3466
F1PP_T	471817
F2_S	0
CLEAR	211427
F2PP_T	400585
F3PPA_T	39
E1	2
E2	0
PL_2	0
PL_3	2
CLOCK	198281
TGT_NAI	153
TGT_BAF	620
MOMOTA	4590617
OKUNO	0
FC	1744
MOMOT1	12857139
MOMOT2	16050414
MOMOT3	14429120
OKUNO1	25
OKUNO2	0
OKUNO3	22
F3PEP_T	12
LIVE_TGT_NAI	144
LIVE_TGT_BAF	568
LIVE_MOMOTA	4249291
LIVE_OKUNO	0
LIVE_FC	1623
LIVE_MOMOT1	11903551
LIVE_MOMOT2	1489459
LIVE_MOMOT3	13384027
LIVE_OKUNO1	23
LIVE_OKUNO2	0
LIVE_OKUNO3	19
LIVE_NONE	0

prisca

8/04/04 9:59

Run17

Start -- Fri Jun 4 09:56:00 2004  
Stop -- Fri Jun 4 09:59:19 2004

Scaler Name : Total



Change Trigger. F1PPAC → F2PPAC

Run number:	18	Tape:	Name:
Description:	Nothing in F1, beam centered		
Date:	2004/6/4	Time:	1013
Brho1:		Brho2:	
NMR1:	694.053	NMR2:	694.404
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	open mm	F1PPAC:	IN <u>OUT</u>
Wedge:	<u>none</u>	100mg/Al	60mg/Al
F2 slit:	<u>open</u>	*	
F2PPAC:	<u>IN</u> OUT	F3PPACs:	IN OUT
F2 Scint:	IN <u>OUT</u>	F3 Scint:	IN OUT
Rips control	yes/no	prisca	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		F2 PPAC

Bias voltage table:	
U dE=	I dE=
U F1=	I F1=
U F2=	I F2=
U F3=	I F3=
U F4=	I F4=
F1 PPAC=	NaI(Tl)_1=

```

6:04:04.10:16 prisca
Run18
Start -- Fri Jun 4 10:13:25 2004
Stop  -- Fri Jun 4 10:15:25 2004
Scaler Name : Total
UNGATED : 106956
GATED : 100681
NONE : 1232
F1PP T : 3
F2 SI : 0
CLEARS : 75153
F2PP T : 106977
F3PPA T : 21
EI : 1
PL_2 : 0
PL_3 : 0
CLOCK : 120319
TGT_NAI : 85
TGT_BAF : 396
MOMOTA : 2813797
OKUNO : 0
FC : 1021
MOMOT1 : 7823668
MOMOT2 : 9777270
MOMOT3 : 8806001
OKUNO1 : 12
OKUNO2 : 0
OKUNO3 : 9
F3PP T : 5
LIVE_TGT_NAI : 83
LIVE_TGT_BAF : 384
LIVE_MOMOTA : 2732053
LIVE_OKUNO : 0
LIVE_FC : 995
LIVE_MOMOT1 : 7597048
LIVE_MOMOT2 : 9494007
LIVE_MOMOT3 : 8567916
LIVE_OKUNO1 : 12
LIVE_OKUNO2 : 0
LIVE_OKUNO3 : 9
NONE : 0
  
```

Run number:	19	Tape:	Name:
Description:	Wedge + thickness measurement 60mg/cm <sup>2</sup> wedge		
Date:	6/14	Time:	1024
Bhol:		Bhol2:	
NMR1:	694.055	NMR2:	629.624
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	open mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisca	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		F2PPAC

**Bias voltage table:**

U dE	I dE
U E1	I E1
U E2	I E2
U E3	I E3
U E4	I E4
F1_PPAC=	NaI(Tl)_1=
F2_PPAC=	NaI(Tl)_2=
F3_PPAC1=	NaI(Tl)_3=
F3_PPAC2=	NaI(Tl)_4=

6/14/04, 04:10:26 prisca  
Run19

Start -- Fri Jun 4 10:24:31 2004  
Stop -- Fri Jun 4 10:26:48 2004

Scaler Name : Total

```

UNGATED : 184384
GATED : 123664
NONE : 1510
F1PP T : 45584
F2 SI : 0
CLEARS : 92111
F2PP T : 184413
F3PPA T : 18
E1 : 1
E2 : 0
E3 : 0
E4 : 0
CLOCK : 137096
TGT_NAI : 124
TGT_EAF : 407
MOMOTA : 3192939
OKUNO : 0
FC : 1124
MOMOT1 : 8807799
MOMOT2 : 11133997
MOMOT3 : 9993710
OKUNO1 : 21
OKUNO2 : 1
OKUNO3 : 20
F3PPB T : 6
LIVE_TGT_NAI : 119
LIVE_TGT_EAF : 399
LIVE_MOMOTA : 3092773
LIVE_OKUNO : 0
LIVE_FC : 1087
LIVE_MOMOT1 : 8533148
LIVE_MOMOT2 : 10788377
LIVE_MOMOT3 : 9703045
LIVE_OKUNO1 : 20
LIVE_OKUNO2 : 1
LIVE_OKUNO3 : 19
LIVE_NONE : 0

```

Run number:	20	Type:	None
Description:	Thickness measurement of 116mg/cm <sup>2</sup> wedge		
Date:	6/4	Time:	1034
Brho1:	2498.602	Brho2:	2021.4
NMR1:	694.056	NMR2:	561.500
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	open mm	F1PPAC:	IN OUT
Wedge:	none <sup>116</sup>	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	disc?	SCA??
Trigger:	F1 PPAC/F1Plastic/F2 Plastic.		F2 PPAC

U_01=	U_01=
U_02=	U_02=
U_03=	U_03=
U_04=	U_04=
F1_PPAC=	NaI(Tl)_1=
F2_PPAC=	NaI(Tl)_2=
F3_PPAC1=	NaI(Tl)_3=
F3_PPAC2=	BaF=

6:04:04:10:38  
Run20  
prisca

Start -- Fri Jun 4 10:34:29 2004  
Stop -- Fri Jun 4 10:37:56 2004

Scaler Name : Total

```

UNGATED : 355302
GATED : 173136
NONE : 2164
F1PP_T : 72223
F2_SI : 0
CLEARS : 132005
F2PP_T : 355364
F3PPA_T : 33
FL_1 : 1
FL_2 : 0
FL_3 : 0
CLOCK : 206420
TGT_NAI : 155
TGT_BAF : 609
MOMOTA : 4802975
OKUNO : 0
FC : 1672
MOMOTAI : 13245941
MOMOTAZ : 16729055
MOMOTAS : 15033449
OKUNO1 : 26
OKUNO2 : 0
OKUNO3 : 23
F3PPB_T : 12
LIVE_TGT_NAI : 152
LIVE_TGT_BAF : 586
LIVE_MOMOTA : 4662636
LIVE_OKUNO : 0
LIVE_FC : 1623
LIVE_MOMOTAI : 12860204
LIVE_MOMOTAZ : 16244483
LIVE_MOMOTAS : 14628474
LIVE_OKUNO1 : 26
LIVE_OKUNO2 : 0
LIVE_OKUNO3 : 23
NONE : 0
    
```

Run number:	21	Tape:	Name:
Description:	pc 36+ Charge State distribution		
Date:	6/4	Time:	1123
Brho1:		Brho2:	
NMR1:		NMR2:	
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	± 30 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisca	SC A file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

U_10	95.3	F10F=	0.15
U_11	95.2	F11F=	<del>0.26</del> 0.09
U_12	95.5	F12F=	0.26
U_13	95.3	F13F=	0.15
U_14	95.4	F14F=	0.20
F1_PPAC=	-750	NaI(Tl)_1=	0.81
F2_PPAC=	-752	NaI(Tl)_2=	
F3_PPAC1=	-756	NaI(Tl)_3=	
F3_PPAC2=	-756	BaF=	1502.6

6/04, 04:11:27 prisca

Run21

Start -- Fri Jun 4 11:23:45 2004

Stop -- Fri Jun 4 11:26:50 2004

Scaler Name : Total

```

UNGATED : 172250
GATED : 161027
NONE : 1998
F1PP_T : 172246
F2_Sl : 0
CLEAN : 121879
F2PP_T : 170591
F3PPA_T : 30
E1 : 0
PL_2 : 0
PL_3 : 1
CLOCK : 184639
TGT_NAI : 142
TGT_BAF : 586
MOMTA : 4292695
OKUNO : 0
FC : 1596
MOMTAL : 11809582
MOMTA2 : 14973888
MOMTA3 : 13455335
OKUNO1 : 25
OKUNO2 : 1
OKUNO3 : 13
F3PP_T : 7
LIVE_TGT_NAI : 137
LIVE_TGT_BAF : 569
LIVE_MOMTA : 4162842
LIVE_OKUNO : 0
LIVE_FC : 1535
LIVE_MOMTAL : 11452221
LIVE_MOMTA2 : 14522614
LIVE_MOMTA3 : 13076123
LIVE_OKUNO1 : 25
LIVE_OKUNO2 : 1
LIVE_OKUNO3 : 13
LIVE_NONE : 0

```

Run number:	22	Type:	Name:
Description:	35+ Charge State distribution		
Date:	6/4	Time:	1131
Brho1:		Brho2:	
NMR1:	694.051	NMR2:	664.9
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	130 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisca	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

Bias voltage table:	
U_dE=	U_dE=
U_E1=	U_E1=
U_E2=	U_E2=
U_E3=	U_E3=
U_E4=	U_E4=
F1_PPAC=	NaI(Tl)_1=
F2_PPAC=	NaI(Tl)_2=
F3_PPAC1=	NaI(Tl)_3=
F3_PPAC2=	BaF=

prisca

6/4/04 11:33

Run22

Start -- Fri Jun 4 11:31:14 2004  
 Stop -- Fri Jun 4 11:33:00 2004

Scaler Name : Total

```

UNGATED : 81377
GATED : 76720
NONE : 932
F1PP T : 81385
F2 SI : 0
CLEARS : 60513
F2PP T : 42255
F3PPA T : 18
E1 : 3
E2 : 0
PL_2 : 0
PL_3 : 2
CLOCK : 106259
TGT_NAI : 85
TGT_BAF : 371
MOMOTA : 2474017
OKUNO : 0
FC : 923
MOMOTA1 : 6781092
MOMOTA2 : 8615108
MOMOTA3 : 7729645
OKUNO1 : 12
OKUNO2 : 0
OKUNO3 : 11
F3PPE T : 6
LIVE TGT_NAI : 85
LIVE TGT_BAF : 363
LIVE_MOMOTA : 2412330
LIVE_OKUNO : 0
LIVE_FC : 902
LIVE_MOMOTA1 : 6610591
LIVE_MOMOTA2 : 839407
LIVE_MOMOTA3 : 7550924
LIVE_OKUNO1 : 12
LIVE_OKUNO2 : 0
LIVE_OKUNO3 : 11
NONE : 0
  
```

Run 23 is junk.

Run number:	24	Tape:	Name:
Description:	33+ Charge State Distribution		
Date:	6/4	Time:	1142
Brho1:		Brho2:	
NMR1:	694.054	NMR2:	684.445
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	I 30 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisca	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

04:04:04:11:44 prisca  
 Run24  
 Start -- Fri Jun 4 11:42:05 2004  
 Stop -- Fri Jun 4 11:44:28 2004  
 Scaler Name : Total

```

113098 UNGATED :
108907 GATED :
1370 NONE :
113114 F1PP T :
83571 F2 SI :
204 CLEARS :
30 F2PP T :
2 F3PP T :
3 El :
0 PL_2 :
0 PL_3 :
142038 CLOCK :
98 TGT NAI :
437 TGT BAF :
3305344 MOMTA :
0 OKUNO :
1173 FC :
9058293 MOMTAL :
11529721 MOMTA2 :
10344047 MOMTA3 :
26 OKUNO1 :
0 OKUNO2 :
13 OKUNO3 :
11 F3PP T :
95 F3PP T :
433 LIVE_TGT_NAI :
3218589 LIVE_TGT_BAF :
0 LIVE_MOMTA :
1149 LIVE_OKUNO :
8819746 LIVE_FC :
11229306 LIVE_MOMTAL :
10094661 LIVE_MOMTA2 :
25 LIVE_MOMTA3 :
0 LIVE_OKUNO1 :
13 LIVE_OKUNO2 :
0 LIVE_OKUNO3 :
0 NONE :
  
```

Run number	25	Date	
Description	34+ Charge state distribution		
Date	6/4	Time	1146
Beam		Beam2	
NMR1	694.054	NMR2	665.475
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	±30 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	PRISCA	SCALING
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

6/04/04 11:48 prisca

```

Run25
Start -- Fri Jun 4 11:46:27 2004
Stop  -- Fri Jun 4 11:48:52 2004

Scaler Name : Total
UNGATED : 109958
GATED : 104012
NONE : 1344
F1PP T : 109966
F2 SI : 0
CLEARS : 81985
F2PP T : 9419
F3PPA T : 32
E1 : 2
PL_2 : 1
PL_3 : 0
CLOCK : 144566
TGT_NAI : 101
TGT_BAF : 455
MONOTA : 3369928
OKUNO : 0
FC : 1195
MOMTAL : 9215142
MOMTA2 : 11729280
MOMTA3 : 10529032
OKUNO1 : 10
OKUNO2 : 1
OKUNO3 : 15
F3PPB T : 5
LIVE_TGT_NAI : 96
LIVE_TGT_BAF : 443
LIVE_MOMOTA : 3285081
LIVE_OKUNO : 0
LIVE_FC : 1168
LIVE_MOMTAL : 8982308
LIVE_MOMTA2 : 11435979
LIVE_MOMTA3 : 10287340
LIVE_OKUNO1 : 10
LIVE_OKUNO2 : 1
LIVE_OKUNO3 : 15
LIVE_NONE : 0

```

Run number:	26	Label:	Name:
Description:	36e → 36t (FI PPAC only)		
Date:	6/4	Time:	12:00 PM
Brho1:		Brho2:	
NMR1:	694.055	NMR2:	692.414
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	± 30 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisa	SCA file

FI PPAC trigger

6-04-04 11:59 prisa	
Run26	
Start -- Fri Jun 4 11:55:38 2004	
Stop -- Fri Jun 4 11:58:49 2004	
Scaler Name:	Total
UNGATED :	141470
GATED :	137590
NONE :	1782
F1PP T :	141480
F2 SI :	0
CLEAR :	108703
F2PP T :	129025
F3PPA T :	44
BI :	1
PL_2 :	1
PL_3 :	0
CLOCK :	190475
TGT NAI :	121
TGT BAF :	590
MOMOTA :	4438369
OKUNO :	0
FC :	1525
MOMTAL :	12125380
MOMOT2 :	15449283
MOMOT3 :	13868956
OKUNO1 :	21
OKUNO2 :	1
OKUNO3 :	21
F3PPB T :	19
LIVE_TGT_NAI :	118
LIVE_TGT_BAF :	577
LIVE_MOMOTA :	4326850
LIVE_OKUNO :	0
LIVE_FC :	1478
LIVE_MOMTAL :	11820752
LIVE_MOMOT2 :	15063400
LIVE_MOMOT3 :	13550073
LIVE_OKUNO1 :	20
LIVE_OKUNO2 :	1
LIVE_OKUNO3 :	21
LIVE_NONE :	0



Run number	27	Tape	Name
Description	36+ → 35+ (F1PPAC)		
Date	6/4	Time	12:05 PM
Beam		Beam?	
NMR1	694.055	NMR2	712.038
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	± 30 mm	F1PPAC:	(IN) OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	(IN) OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisa	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

6-104-04-12:04 prisa

```

Run27
Start -- Fri Jun 4 12:01:19 2004
Stop  -- Fri Jun 4 12:04:43 2004

Scaler Name : Total
UNGATED : 521556
GATED : 473907
NONE : 4118
F1PP T : 521655
F2 SI : 0
CLEARS : 251199
F2PP T : 65874
F3PPA T : 33
E1 : 2
E2 : 0
E3 : 0
FL_2 : 1
FL_3 : 203471
CLOCK : 202
TGT_NAI : 202
TGT_BAF : 638
MOMOTA : 4728454
OKUNO : 0
FC : 1491
MOMOTA1 : 12949792
MOMOTA2 : 16508154
MOMOTA3 : 14823357
OKUNO1 : 26
OKUNO2 : 1
OKUNO3 : 18
F3PPB T : 17
LIVE_TGT_NAI : 178
LIVE_TGT_BAF : 591
LIVE_MOMOTA : 4347835
LIVE_OKUNO : 0
LIVE_FC : 1370
LIVE_MOMOTA1 : 11909840
LIVE_MOMOTA2 : 15182514
LIVE_MOMOTA3 : 13662537
LIVE_OKUNO1 : 24
LIVE_OKUNO2 : 1
LIVE_OKUNO3 : 17
LIVE_NONE : 0

```

Rin number:	28	Type:	Name:
Description:	36+ → 34+ (F1 PPAC only)		
Date:	6/4	Time:	12:06 P
Brho1:		Brho2:	732.589
NMR1:	694.055	NMR2:	<del>732.589</del>
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	E 30 mm	F1PPAC:	(IN) OUT
Wedge:	(none)	100mg/Al	60mg/Al
F2 slit:	(open)		
F2PPAC:	(IN) OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisca	SC A file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

6/04/04 12:18 prisca

Run28

Start -- Fri Jun 4 12:06:27 2004  
 Stop -- Fri Jun 4 12:18:26 2004

Scaler Name : Total

```

UNGATED : 1890984
GATED : 1722097
NONE : 14908
F1PP T : 1891368
F2_SI : 0
CLEARS : 909389
F2PP T : 12068
F3PPA_T : 166
E1 : 13
PL_2 : 2
PL_3 : 0
711638
CLOCK : 711
TGT_NAI : 711
TGT_BAF : 2245
MOMOTA : 16573388
OKUNO : 0
FC : 5340
MOMOTA1 : 45343724
MOMOTA2 : 57808959
MOMOTA3 : 51839138
OKUNO1 : 75
OKUNO2 : 3
OKUNO3 : 59
F1PP T : 213
LIVE_TGT_NAI : 656
LIVE_TGT_BAF : 2056
LIVE_MOMOTA : 15188822
LIVE_OKUNO : 0
LIVE_FC : 4868
LIVE_MOMOTA1 : 41557422
LIVE_MOMOTA2 : 52989315
LIVE_MOMOTA3 : 47610310
LIVE_OKUNO1 : 70
LIVE_OKUNO2 : 3
LIVE_OKUNO3 : 54
NONE : 0
  
```

A  
Z  
Ent  
wdg t  
wd

j= 86	
j= 36	
f= 63.77	MeV/u
c= 2.516	mg/cm2
a= 13	

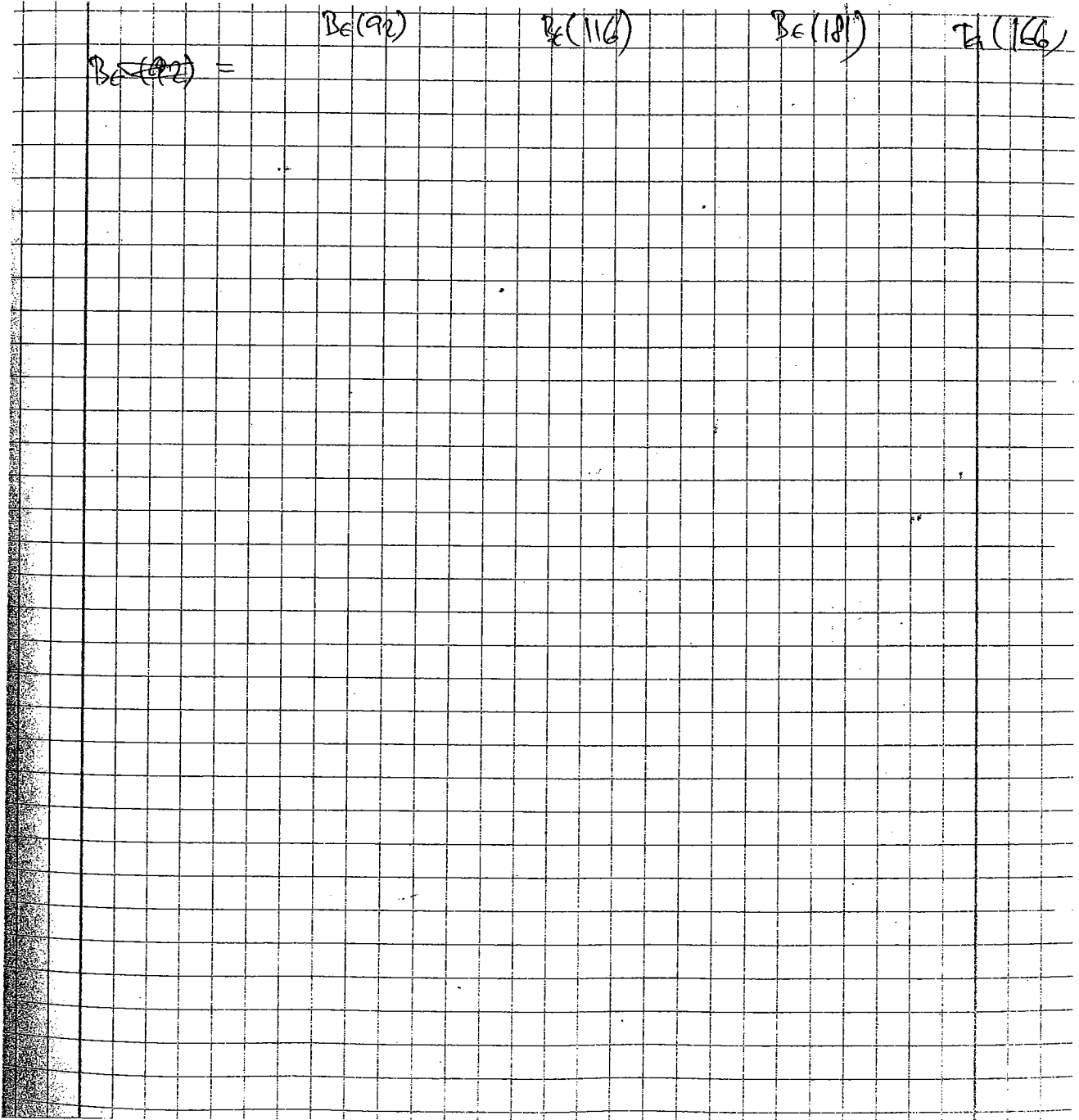
3.351801

f1_PPAC=	2.516	mg/cm of Al
Al(60)=	64.935	mg/cm of Al
Al(116)=	119.967	mg/cm of Al

PPAC thickness

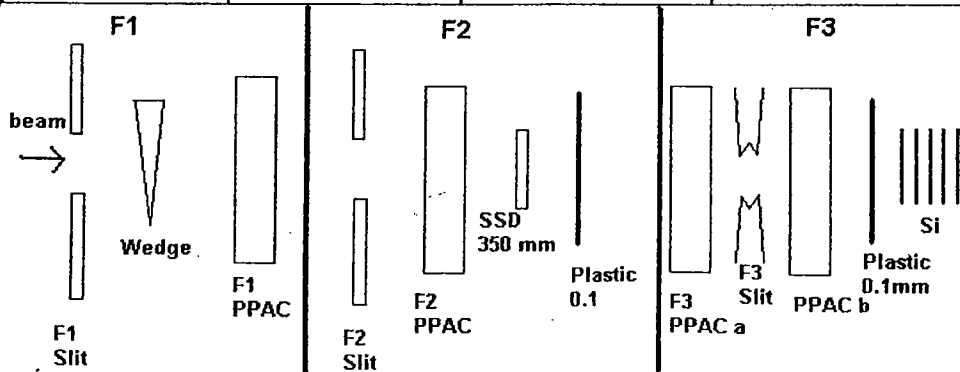
Al(60)  
Al(116)

	MEASURED		Measured		Measured		Measured			
	1 [Tm]	2 [Tm]	1 [Tm]	2 [Tm]	1 [Tm]	2 [Tm]	1 [Tm]	2 [Tm]		
TGT_MAT	Be	Be	Be	Be	Be	Be	Be	Ta	Ta	
TGT_Z	4	4	4	4	4	4	4	73	73	
Thickness	0	0	97.78	97.78	122.6	122.6	189.86	189.86	154.54	154.5
	63.77	63.486	51.357	51.03	47.881	47.539	37.502	37.105	51.766	51.441



Run number:	29	Tape:	Name:
Description:			
Date:	6/4	Time:	
Brho1:		Brho2:	
NMRI:	472.209	NMR2:	472.320
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	± 3 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisa	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

Bias voltage table:			
U dE=	+95.3 V	I dE=	0.15 $\mu$ A
U E1=	+95.2 V	I E1=	0.09 $\mu$ A
U E2=	+95.5 V	I E2=	0.25 $\mu$ A
U E3=	+95.3 V	I E3=	0.14 $\mu$ A
U E4=	+95.4 V	I E4=	0.20 $\mu$ A
F1_PPAC=		NaI(Tl)_1=	
F2_PPAC=		NaI(Tl)_2=	
F3_PPAC1=		NaI(Tl)_3=	
F3_PPAC2=		BaF=	



Run29

Start -- Fri Jun 4 13:52:06 2004  
Stop -- Fri Jun 4 14:40:49 2004

Scaler Name : Total

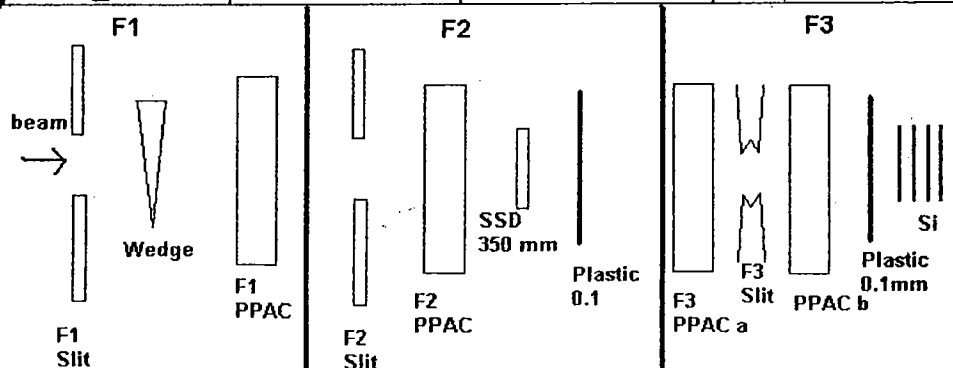
UNGATED :	585030
GATED :	561585
NONE :	8530
F1PP T :	133
F2 SI :	0
CLEARs :	520331
F2PP T :	173724
F3PPA T :	178406
E1 :	154702
PL 2 :	418440
PL 3 :	271152
CLOCK :	2921090
TGT NAI :	88434909
TGT BAF :	218555
MOMOTA :	68373362
OKUNO :	7100
FC :	19424
MOMOTA1 :	180973152
MOMOTA2 :	223848321
MOMOTA3 :	197980586
OKUNO1 :	246515
OKUNO2 :	52934
OKUNO3 :	39422
F3PPB T :	141017
LIVE TGT NAI :	87804700
LIVE TGT BAF :	216909
LIVE MOMOTA :	67913753
LIVE OKUNO :	7047
LIVE FC :	19310
LIVE MOMOTA1 :	179756830
LIVE MOMOTA2 :	222281760
LIVE MOMOTA3 :	197274038
LIVE OKUNO1 :	244734
LIVE OKUNO2 :	52543
LIVE OKUNO3 :	39145
NONE :	0

14/6/04, 2004

/tmp/prisca

Run number:	30	Tape:	Name:
Description:	Run 30, Brho1 = 2 = 1.85		
Date:	6/4	Time:	1451
Brho1:	1.85	Brho2:	1.85
NMR1:		NMR2:	
Target:	Be(92) <sup>ok</sup>	Ta(166)	Be(115) Be(181)
F1 slit:	±3 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT <sup>±54μ</sup>
Rips control	yes/no	prisca	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

U_d1=	95.3	L_d1=	0.15
U_E1=	95.2	L_E1=	0.09
U_E2=	95.5	L_E2=	0.25
U_E3=	95.3	L_E3=	0.14
U_E4=	95.4	L_E4=	0.20
F1_PPAC=	-750	NaI(Tl)_1=	0.81
F2_PPAC=	-752	NaI(Tl)_2=	
F3_PPAC1=	-756	NaI(Tl)_3=	
F3_PPAC2=	-756	BaF=	<del>1502.8</del> 1502.8



log.adl

# RIPS Control Summary

2004/06/04 15:01:02

Parameter	Set Curr.	Read Curr.	Target	F2
Q1	1.3167	120.3809	120.454	FC Out
Q2	1.5337	96.1520	94.925	Rgt 50.1
Q3	0.7725	91.2800	90.862	Lft 50.0
SX1	0.0000	0.1469	0.000	PPAC
D1	0.2777	286.2751	288.322	SSD -94.8
SX2	0.0000	0.1469	0.000	Deg Out -4.9
Q4	0.5572	49.4780	49.459	Pla IN
Q5	0.7942	62.0110	62.078	
Q6	0.6197	55.2067	55.525	
SX3	0.0000	0.1469	0.021	
D2	0.2777	297.7555	297.205	
SX4	0.0000	0.1469	0.000	
Q7	0.6468	76.4060	77.171	
Q8	1.1259	79.7753	79.966	
Q9	1.0222	93.2305	93.335	
Q10	1.1110	107.2141	108.564	
Q11	1.4205	117.7172	116.308	
Q12	1.1106	107.1753	108.453	

Parameter	Set Curr.	Read Curr.	Target	F1	F3
Tgt	194.6			PPAC1 IN	DW
FC Out				Rgt 49.9	
Up	24.0			Lft 50.0	
Dwn	24.0			PPAC2 IN	
Rgt	24.0			SSD Out	
Lft	23.8			Pla IN	
Let				Lgt	

Focus	Brho	TA-F1	Im	Rot	deg.
F1-F2	1.8500	Im	F2-F3	1.8500	Im

*Handwritten note: voltage changed to 0.30kV*

6:04:04 16:15 prisca

Run30

Start -- Fri Jun 4 14:51:30 2004  
Stop -- Fri Jun 4 16:15:40 2004

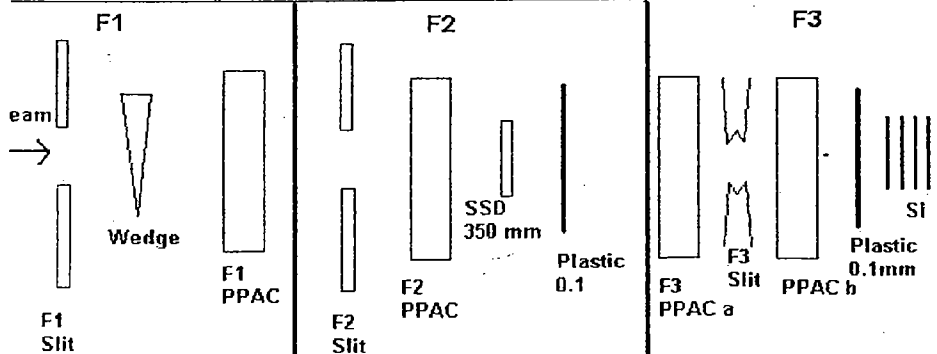
Scaler Name : Total

UNGATED :	946940
GATED :	805860
NONE :	12456
F1PP T :	231
F2 SI :	0
CLEAR :	759817
F2PP T :	792515
F3PP T :	678361
E1 :	636221
PL 2 :	776084
PL 3 :	726041
CLOCK :	5046826
TGT_NAI :	33299362
TGT_BAF :	255216
MOMOTA :	100921267
OKUNO :	8387
FC :	39533
MOMOTA1 :	307463846
MOMOTA2 :	36605282
MOMOTA3 :	331217731
OKUNO1 :	284198
OKUNO2 :	61098
OKUNO3 :	45524
F3PP T :	640817
LIVE_TGT_NAI :	33110072
LIVE_TGT_BAF :	253772
LIVE_MOMOTA :	100352463
LIVE_OKUNO :	8235
LIVE_FC :	39301
LIVE_MOMOTA1 :	305748524
LIVE_MOMOTA2 :	364076051
LIVE_MOMOTA3 :	330642400
LIVE_OKUNO1 :	282579
LIVE_OKUNO2 :	60697
LIVE_OKUNO3 :	45237
NONE :	0

Run number:	31	Tape:	Name:
Description:	dE bias = 105V		
Date:	6/4	Time:	1737
Brho1:		Brho2:	
NMR1:	514.709	NMR2:	514.931
Target:	Be(92) <i>old</i>	Ta(166)	Be(115) Be(181)
F1 slit:	mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisca	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

**Bias voltage table (please compare to previous values)**

U dE=	105	I dE=	0.16
U E1=	95.5	I E1=	0.12
U E2=	95.4	I E2=	6.24
U E3=	95.43	I E3=	0.14
U E4=	95.4	I E4=	0.19
F1_PPAC=	-750	NaI(Tl)_1=	0.30kV
F2_PPAC=	-753	NaI(Tl)_2=	
F3_PPACA=	-756	NaI(Tl)_3=	
F3_PPACB=	-756	BaF=	1502.6







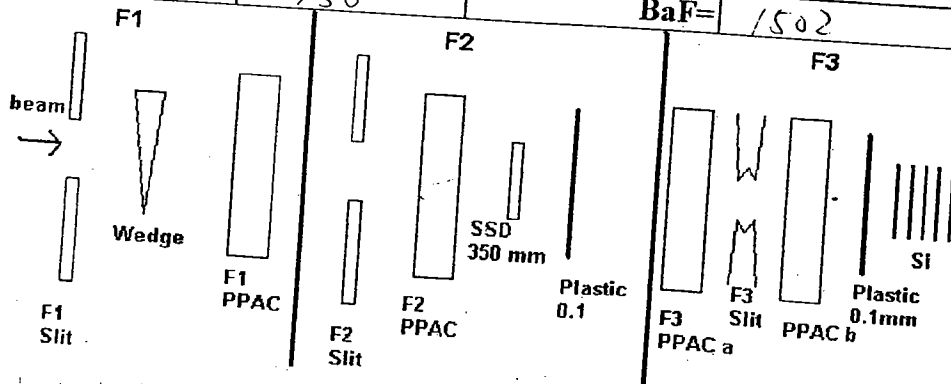
*copy calibration*

Run	NaI	Beam	
32	600V	on	run sheet (p. 70)
33	600V	off	no run sheet

Run number:	32	Tape:	Name:
Description:	NaI 600V, with beam		
Date:	6/4	Time:	18 20
Brho1:	2.4	Brho2:	2.4
NMRI:	667.039	NMR2:	667.520
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	± 3 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisca	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

**Bias voltage table (please compare to previous values)**

U dE-	95.3	I dE-	0.15
U E1-	95.2	I E1-	0.12
U E2-	95.5	I E2-	0.24
U E3-	95.4	I E3-	0.20
U E4-	95.3	I E4-	0.14
F1_PPAC=	-750	NaI(Tl) 1=	
F2_PPAC=	-753	NaI(Tl) 2=	
F3_PPAC=	-756	NaI(Tl) 3=	
F3_PPACB=	-756	BaF=	1502



Run 3.2

6:04, 04:18:25 prisca

Run32  
Start -- Fri Jun 4 18:20:33 2004  
Stop -- Fri Jun 4 18:25:20 2004

Scaler Name :	Total
UNGATED :	35693
GATED :	32453
NONE :	532
F1PP T :	11
F2 SI :	0
CLEARs :	32453
F2PP T :	36595
F3PPA T :	33580
E1 :	33440
PL 2 :	33894
PL 3 :	34009
CLOCK :	286854
TGT NAI :	3517
TGT BAF :	950
MOMOTA :	86
OKUNO :	2
FC :	3718
MOMOTA1 :	165475
MOMOTA2 :	23969052
MOMOTA3 :	20830031
OKUNO1 :	51
OKUNO2 :	11
OKUNO3 :	35
F3PPB T :	33537
LIVE TGT NAI :	3330
LIVE TGT BAF :	899
LIVE MOMOTA :	82
LIVE OKUNO :	2
LIVE FC :	3513
LIVE MOMOTA1 :	157894
LIVE MOMOTA2 :	22865080
LIVE MOMOTA3 :	19864871
LIVE OKUNO1 :	46
LIVE OKUNO2 :	9
LIVE OKUNO3 :	35
LIVE_CLOCK :	273463

Parameter	Brho
Q1	1.3167 2.4000
Q2	1.5337 2.4000
Q3	0.7725 2.4000
S01	0.0000 2.4000
S02	0.2777 2.4000
S03	0.0000 2.4000
Q4	0.5572 2.4000
Q5	0.7942 2.4000
Q6	0.6197 2.4000
S08	0.0000 2.4000
I2	0.2777 2.4000
S04	0.0000 2.4000
Q7	0.6468 2.4000
Q8	1.1259 2.4000
Q9	1.0222 2.4000
Q10	1.2271 2.4000
Q11	1.4596 2.4000
Q12	1.0958 2.4000

6:04, 04:18:29 prisca

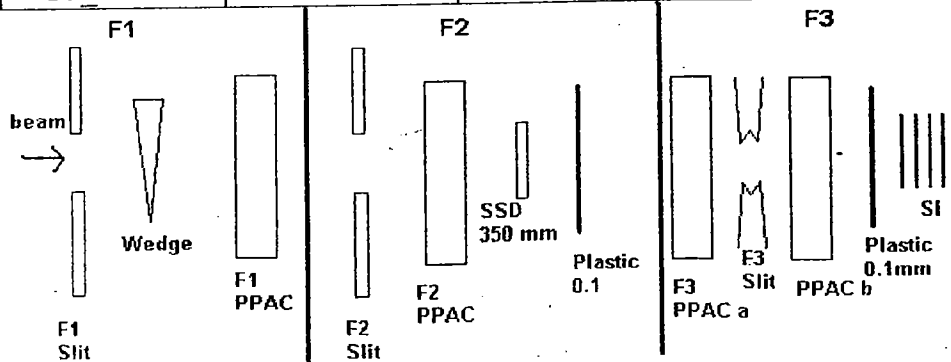
Run33  
Start -- Fri Jun 4 18:27:46 2004  
Stop -- Fri Jun 4 18:29:14 2004

Scaler Name :	Total
UNGATED :	0
GATED :	0
NONE :	0
F1PP T :	0
F2 SI :	0
CLEARs :	0
F2PP T :	0
F3PPA T :	0
E1 :	0
PL 2 :	0
PL 3 :	0
CLOCK :	0
TGT NAI :	0
TGT BAF :	0
MOMOTA :	0
OKUNO :	0
FC :	0
MOMOTA1 :	0
MOMOTA2 :	0
MOMOTA3 :	0
OKUNO1 :	0
OKUNO2 :	0
OKUNO3 :	0
F3PPB T :	0
LIVE TGT NAI :	0
LIVE TGT BAF :	0
LIVE MOMOTA :	0
LIVE OKUNO :	0
LIVE FC :	0
LIVE MOMOTA1 :	0
LIVE MOMOTA2 :	0
LIVE MOMOTA3 :	0
LIVE OKUNO1 :	0
LIVE OKUNO2 :	0
LIVE OKUNO3 :	0
LIVE_CLOCK :	0

Maximum Beam Intensity  
SerI 1450V.

Run number:	34	Tape:	Name:
Description:	High intensity calibration with Be-F. maximum beam		
Date:	6/4	Time:	
Brho1:	29	Brho2:	
NMR1:	805467	NMR2:	668.0
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisca	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

Bias voltage table (please compare to previous values)			
U dE=		I dE=	
U E1=		I E1=	
U E2=		I E2=	
U E3=		I E3=	
U E4=		I E4=	
F1_PPAC=		NaI(Tl)_1=	
F2_PPAC=		NaI(Tl)_2=	
F3_PPACA=		NaI(Tl)_3=	
F3_PPACB=		BaF=	



Parameter	Value	Unit
Q1	1.3167	2.9000
Q2	1.5337	2.9000
Q3	0.7725	2.9000
SX1	0.0000	2.9000
D1	0.2777	2.9000
SX2	0.0000	2.9000
Q4	0.5572	2.9000
Q5	0.7942	2.4000
Q6	0.6197	2.4000
SX3	0.0000	2.4000
D2	0.2777	2.4000
SX4	0.0000	2.4000
Q7	0.6468	2.4000
Q8	1.1259	2.4000
Q9	1.0222	2.4000
Q10	1.2271	2.9000
Q11	1.4596	2.9000
Q12	1.0958	2.9000

exit

Run #	Beam I	$\beta$ Integrator range	Tgt	B&F
34	SEN A	3.0	.Be 185	1450
35	4.5	10		"
36	4.5	10		"
37	0.65	3		"
38	0.3	3		"
39	<del>7.5</del>	30		"
40	16	30		"
41	33	100		"
42	110	300		"
43	380	1000		"
44	360	1000	empty	"
45	<del>139</del>	300	empty	"
46	<del>139</del>	300	empty	"
47	<del>42</del>	100	empty	"
48	20	30	empty	"
49	9	30	empty	"
50	5.3	10	empty	"
51	0.95	3	empty	"
52	0.6	3	empty	"
53	0.4	3	Be 92	"

RUN31 - RUN39 not saved on tape, saved on hard disk

Run34  
 Start -- Fri Jun 4 19:28:20 2004  
 Stop -- Fri Jun 4 19:29:20 2004

Scaler Name :	Total
UNGATED :	6100
GATED :	6100
NONE :	100
F1PP T :	1
F2 SI :	0
CLEARs :	6101
F2PP T :	26544
F3PPA T :	8
E1 :	95
PL 2 :	0
PL 3 :	0
CLOCK :	58956
TGT NAI :	0
TGT BAF :	27506
MOMOTA :	57620
OKUNO :	1099
FC :	15402
MOMOTA1 :	150464
MOMOTA2 :	6157591
MOMOTA3 :	7019875
OKUNO1 :	43677
OKUNO2 :	10748
OKUNO3 :	9550
F3PPB T :	1
LIVE TGT NAI :	0
LIVE TGT BAF :	26411
LIVE MOMOTA :	55181
LIVE OKUNO :	1062
LIVE FC :	14751
LIVE MOMOTA1 :	144200
LIVE MOMOTA2 :	5901288
LIVE MOMOTA3 :	6735932
LIVE OKUNO1 :	41853
LIVE OKUNO2 :	10348
LIVE OKUNO3 :	9188
LIVE_CLOCK :	58833

Run35  
 Start -- Fri Jun 4 19:34:40 2004  
 Stop -- Fri Jun 4 19:37:35 2004

Scaler Name :	Total
UNGATED :	17934
GATED :	17934
NONE :	294
F1PP T :	1
F2 SI :	0
CLEARs :	17935
F2PP T :	79093
F3PPA T :	29
E1 :	253
PL 2 :	0
PL 3 :	1
CLOCK :	173632
TGT NAI :	465044
TGT BAF :	47268
MOMOTA :	100580
OKUNO :	1809
FC :	75843
MOMOTA1 :	316509
MOMOTA2 :	16759486
MOMOTA3 :	17365037
OKUNO1 :	75113
OKUNO2 :	18818
OKUNO3 :	16621
F3PPB T :	3
LIVE TGT NAI :	445156
LIVE TGT BAF :	45277
LIVE MOMOTA :	96373
LIVE OKUNO :	1744
LIVE FC :	72623
LIVE MOMOTA1 :	303168
LIVE MOMOTA2 :	16052161
LIVE MOMOTA3 :	16642758
LIVE OKUNO1 :	71950
LIVE OKUNO2 :	18022
LIVE OKUNO3 :	15956
LIVE_CLOCK :	173290

Run36  
 Start -- Fri Jun 4 19:38:26 2004  
 Stop -- Fri Jun 4 19:40:11 2004

Scaler Name :	Total
UNGATED :	11468
GATED :	11468
NONE :	188
F1PP T :	2
F2 SI :	0
CLEARs :	11469
F2PP T :	47837
F3PPA T :	10
E1 :	271
PL 2 :	0
PL 3 :	0
CLOCK :	104516
TGT NAI :	1325687
TGT BAF :	28891
MOMOTA :	60784
OKUNO :	1163
FC :	46055
MOMOTA1 :	191196
MOMOTA2 :	10050488
MOMOTA3 :	8869116
OKUNO1 :	45472
OKUNO2 :	11251
OKUNO3 :	10095
F3PPB T :	6
LIVE TGT NAI :	1267072
LIVE TGT BAF :	27604
LIVE MOMOTA :	58069
LIVE OKUNO :	1127
LIVE FC :	43988
LIVE MOMOTA1 :	182514
LIVE MOMOTA2 :	9606419
LIVE MOMOTA3 :	8473781
LIVE OKUNO1 :	43494
LIVE OKUNO2 :	10755
LIVE OKUNO3 :	9623
LIVE_CLOCK :	103841

Run37  
 Start -- Fri Jun 4 19:43:03 2004  
 Stop -- Fri Jun 4 19:48:48 2004

Scaler Name :	Total
UNGATED :	35746
GATED :	35746
NONE :	586
F1PP T :	10
F2 SI :	0
CLEARs :	35747
F2PP T :	156450
F3PPA T :	54
E1 :	487
PL 2 :	1
PL 3 :	3
CLOCK :	344960
TGT NAI :	1271397
TGT BAF :	26683
MOMOTA :	57782
OKUNO :	1119
FC :	77302
MOMOTA1 :	374650
MOMOTA2 :	30450360
MOMOTA3 :	26711656
OKUNO1 :	42085
OKUNO2 :	10584
OKUNO3 :	9518
F3PPB T :	7
LIVE TGT NAI :	1217466
LIVE TGT BAF :	25564
LIVE MOMOTA :	55292
LIVE OKUNO :	1074
LIVE FC :	74029
LIVE MOMOTA1 :	358536
LIVE MOMOTA2 :	29159330
LIVE MOMOTA3 :	25579608
LIVE OKUNO1 :	40382
LIVE OKUNO2 :	10136
LIVE OKUNO3 :	9098
LIVE_CLOCK :	344233

Run3  
Start -- Fri Jun 4 19:50:43 2004  
Stop -- Fri Jun 4 19:57:58 2004

Scaler Name :	Total
UNGATED :	44774
GATED :	44774
NONE :	734
F1PP T :	13
F2 SI :	0
CLEAR S :	44775
F2PP T :	196994
F3PPA T :	60
E1 :	472
PL 2 :	2
PL 3 :	0
CLOCK :	433232
TGT NAI :	639839
TGT BAF :	13524
MOMOTA :	29164
OKUNO :	506
FC :	38374
MOMOTA1 :	405227
MOMOTA2 :	37454415
MOMOTA3 :	32807976
OKUNO1 :	21082
OKUNO2 :	5277
OKUNO3 :	4816
F3PPB T :	4
LIVE TGT NAI :	613210
LIVE TGT BAF :	13968
LIVE MOMOTA :	27894
LIVE OKUNO :	482
LIVE FC :	36780
LIVE MOMOTA1 :	388055
LIVE MOMOTA2 :	35863586
LIVE MOMOTA3 :	31416407
LIVE OKUNO1 :	20181
LIVE OKUNO2 :	5053
LIVE OKUNO3 :	4624
LIVE_CLOCK :	433354

*Visual Scaler*

*N&I*  
644599

*BAF*  
13562

*Momota*  
29257

*Okuno*  
509

*FC*  
38494

*Clock*  
434557

-- Fri Jun 4 20:02:44 2004  
-- Fri Jun 4 20:03:57 2004

Scaler Name :	Total
UNGATED :	7564
GATED :	7564
NONE :	124
F1PP T :	1
F2 SI :	0
CLEAR S :	7565
F2PP T :	33337
F3PPA T :	17
E1 :	59
PL 2 :	2
PL 3 :	0
CLOCK :	73049
TGT NAI :	1644422
TGT BAF :	35426
MOMOTA :	74636
OKUNO :	1415
FC :	54484
MOMOTA1 :	188749
MOMOTA2 :	7633060
MOMOTA3 :	6770732
OKUNO1 :	56343
OKUNO2 :	14025
OKUNO3 :	12269
F3PPB T :	1
LIVE TGT NAI :	1573849
LIVE TGT BAF :	33934
LIVE MOMOTA :	71346
LIVE OKUNO :	1354
LIVE FC :	52152
LIVE MOMOTA1 :	180734
LIVE MOMOTA2 :	7313194
LIVE MOMOTA3 :	6483434
LIVE OKUNO1 :	54028
LIVE OKUNO2 :	13405
LIVE OKUNO3 :	11739
LIVE_CLOCK :	72891

Run40  
Start -- Fri Jun 4 20:06:33 2004  
Stop -- Fri Jun 4 20:07:27 2004

Scaler Name :	Total
UNGATED :	5478
GATED :	5246
NONE :	86
F1PP T :	0
F2 SI :	0
CLEAR S :	5247
F2PP T :	23860
F3PPA T :	9
E1 :	68
PL 2 :	0
PL 3 :	0
CLOCK :	52822
TGT NAI :	2359693
TGT BAF :	51157
MOMOTA :	102683
OKUNO :	2053
FC :	27871
MOMOTA1 :	224765
MOMOTA2 :	6487018
MOMOTA3 :	5811710
OKUNO1 :	78415
OKUNO2 :	19529
OKUNO3 :	17669
F3PPB T :	1
LIVE TGT NAI :	2161674
LIVE TGT BAF :	46836
LIVE MOMOTA :	94012
LIVE OKUNO :	1913
LIVE FC :	25560
LIVE MOMOTA1 :	205964
LIVE MOMOTA2 :	5950343
LIVE MOMOTA3 :	5324510
LIVE OKUNO1 :	71761
LIVE OKUNO2 :	17921
LIVE OKUNO3 :	16238
LIVE_CLOCK :	50383



6:04, 04 20:09

prisca

Run41

Start -- Fri Jun 4 20:09:19 2004  
Stop -- Fri Jun 4 20:09:46 2004

Scaler Name : Total

UNGATED :	2806
GATED :	2806
NONE :	46
F1PP T :	1
F2 SI :	0
CLEARs :	2807
F2PP T :	12394
F3PPA T :	6
E1 :	50
PL 2 :	0
PL 3 :	1
CLOCK :	27286
TGT NAI :	0
TGT BAF :	45890
MOMOTA :	90380
OKUNO :	1826
FC :	8792
MOMOTA1 :	184319
MOMOTA2 :	4087920
MOMOTA3 :	3874805
OKUNO1 :	69189
OKUNO2 :	17428
OKUNO3 :	15252
F3PPB T :	0
LIVE TGT NAI :	0
LIVE TGT BAF :	43939
LIVE MOMOTA :	86562
LIVE OKUNO :	1763
LIVE FC :	8424
LIVE MOMOTA1 :	176756
LIVE MOMOTA2 :	3925927
LIVE MOMOTA3 :	3713810
LIVE OKUNO1 :	66379
LIVE OKUNO2 :	16712
LIVE OKUNO3 :	14577
LIVE CLOCK :	27241

6:04, 04 20:11

prisca

Run42

Start -- Fri Jun 4 20:11:25 2004  
Stop -- Fri Jun 4 20:11:42 2004

Scaler Name : Total

UNGATED :	1708
GATED :	1708
NONE :	28
F1PP T :	0
F2 SI :	0
CLEARs :	1709
F2PP T :	7428
F3PPA T :	0
E1 :	23
PL 2 :	0
PL 3 :	0
CLOCK :	16351
TGT NAI :	0
TGT BAF :	107141
MOMOTA :	200926
OKUNO :	3527
FC :	5950
MOMOTA1 :	339774
MOMOTA2 :	5898385
MOMOTA3 :	5078974
OKUNO1 :	138949
OKUNO2 :	34652
OKUNO3 :	30676
F3PPB T :	0
LIVE TGT NAI :	0
LIVE TGT BAF :	102918
LIVE MOMOTA :	192699
LIVE OKUNO :	3394
LIVE FC :	5690
LIVE MOMOTA1 :	326323
LIVE MOMOTA2 :	5684929
LIVE MOMOTA3 :	4878441
LIVE OKUNO1 :	133329
LIVE OKUNO2 :	33250
LIVE OKUNO3 :	29255
LIVE CLOCK :	16306

6:04, 04 20:15

prisca

Run43

Start -- Fri Jun 4 20:15:15 2004  
Stop -- Fri Jun 4 20:15:27 2004

Scaler Name : Total

UNGATED :	1098
GATED :	1098
NONE :	18
F1PP T :	0
F2 SI :	0
CLEARs :	1099
F2PP T :	4837
F3PPA T :	1
E1 :	22
PL 2 :	0
PL 3 :	0
CLOCK :	10926
TGT NAI :	0
TGT BAF :	619066
MOMOTA :	422248
OKUNO :	7533
FC :	3837
MOMOTA1 :	709963
MOMOTA2 :	9577705
MOMOTA3 :	8374822
OKUNO1 :	307833
OKUNO2 :	75469
OKUNO3 :	67584
F3PPB T :	0
LIVE TGT NAI :	0
LIVE TGT BAF :	592436
LIVE MOMOTA :	404424
LIVE OKUNO :	7223
LIVE FC :	3709
LIVE MOMOTA1 :	681877
LIVE MOMOTA2 :	9221612
LIVE MOMOTA3 :	8044698
LIVE OKUNO1 :	294826
LIVE OKUNO2 :	72368
LIVE OKUNO3 :	64758
LIVE CLOCK :	10926

6:04, 04 20:20

prisca

Run44

Start -- Fri Jun 4 20:18:52 2004  
Stop -- Fri Jun 4 20:20:28 2004

Scaler Name : Total

UNGATED :	9760
GATED :	9760
NONE :	160
F1PP T :	2
F2 SI :	0
CLEARs :	9761
F2PP T :	42589
F3PPA T :	13
E1 :	180
PL 2 :	0
PL 3 :	1
CLOCK :	94616
TGT NAI :	1
TGT BAF :	134024
MOMOTA :	8916
OKUNO :	190
FC :	43005
MOMOTA1 :	822174
MOMOTA2 :	32423584
MOMOTA3 :	22179706
OKUNO1 :	362041
OKUNO2 :	204480
OKUNO3 :	305627
F3PPB T :	6
LIVE TGT NAI :	1
LIVE TGT BAF :	1283566
LIVE MOMOTA :	8516
LIVE OKUNO :	183
LIVE FC :	41193
LIVE MOMOTA1 :	787940
LIVE MOMOTA2 :	31196933
LIVE MOMOTA3 :	21275550
LIVE OKUNO1 :	346553
LIVE OKUNO2 :	195837
LIVE OKUNO3 :	292908
LIVE CLOCK :	94435

rt -- Fri Jun 4 20:22:16 2004  
p -- Fri Jun 4 20:23:26 2004

Scaler Name : Total

UNGATED :	7076
GATED :	7076
NONE :	116
F1PP T :	1
F2 SI :	0
CLEARs :	7077
F2PP T :	31360
F3PPA T :	12
E1 :	99
PL 2 :	2
PL 3 :	0
CLOCK :	69103
TGT NAI :	1
TGT BAF :	199472
MOMOTA :	1669
OKUNO :	37
FC :	30805
MOMOTA1 :	214785
MOMOTA2 :	9870819
MOMOTA3 :	7813265
OKUNO1 :	71976
OKUNO2 :	41844
OKUNO3 :	63271
F3PPB T :	1
LIVE TGT NAI :	1
LIVE TGT BAF :	191268
LIVE MOMOTA :	1597
LIVE OKUNO :	37
LIVE FC :	29487
LIVE MOMOTA1 :	205950
LIVE MOMOTA2 :	9475775
LIVE MOMOTA3 :	7488869
LIVE OKUNO1 :	68929
LIVE OKUNO2 :	40078
LIVE OKUNO3 :	60627
LIVE_CLOCK :	69002

Start -- Fri Jun 4 20:24:30 2004  
Stop -- Fri Jun 4 20:26:51 2004

Scaler Name : Total

UNGATED :	14640
GATED :	14640
NONE :	240
F1PP T :	2
F2 SI :	0
CLEARs :	14641
F2PP T :	62956
F3PPA T :	17
E1 :	219
PL 2 :	0
PL 3 :	1
CLOCK :	140107
TGT NAI :	8977640
TGT BAF :	397781
MOMOTA :	3255
OKUNO :	62
FC :	61182
MOMOTA1 :	429828
MOMOTA2 :	19818641
MOMOTA3 :	15722367
OKUNO1 :	143450
OKUNO2 :	83280
OKUNO3 :	125386
F3PPB T :	6
LIVE TGT NAI :	8590258
LIVE TGT BAF :	380572
LIVE MOMOTA :	3123
LIVE OKUNO :	59
LIVE FC :	58600
LIVE MOMOTA1 :	411619
LIVE MOMOTA2 :	19015422
LIVE MOMOTA3 :	15055982
LIVE OKUNO1 :	137217
LIVE OKUNO2 :	79657
LIVE OKUNO3 :	120156
LIVE_CLOCK :	139716

04,04,20:31

prisca

7

t -- Fri Jun 4 20:29:03 2004  
-- Fri Jun 4 20:31:40 2004

Scaler Name : Total

UNGATED :	16226
GATED :	16226
NONE :	266
F1PP T :	4
F2 SI :	0
CLEARs :	16227
F2PP T :	71180
F3PPA T :	22
E1 :	237
PL 2 :	0
PL 3 :	1
CLOCK :	156715
TGT NAI :	3139294
TGT BAF :	124095
MOMOTA :	1066
OKUNO :	20
FC :	60859
MOMOTA1 :	234042
MOMOTA2 :	16054931
MOMOTA3 :	13476301
OKUNO1 :	47891
OKUNO2 :	27857
OKUNO3 :	41747
F3PPB T :	2
LIVE TGT NAI :	3006922
LIVE TGT BAF :	118977
LIVE MOMOTA :	1012
LIVE OKUNO :	19
LIVE FC :	58315
LIVE MOMOTA1 :	224063
LIVE MOMOTA2 :	15390759
LIVE MOMOTA3 :	12908823
LIVE OKUNO1 :	45873
LIVE OKUNO2 :	26683
LIVE OKUNO3 :	40045
LIVE_CLOCK :	156357

04,04,20:35

prisca

Run48

Start -- Fri Jun 4 20:32:56 2004  
Stop -- Fri Jun 4 20:35:16 2004

Scaler Name : Total

UNGATED :	14274
GATED :	14274
NONE :	234
F1PP T :	6
F2 SI :	0
CLEARs :	14275
F2PP T :	62559
F3PPA T :	26
E1 :	218
PL 2 :	0
PL 3 :	0
CLOCK :	138838
TGT NAI :	1752428
TGT BAF :	66885
MOMOTA :	589
OKUNO :	10
FC :	91619
MOMOTA1 :	170710
MOMOTA2 :	13346876
MOMOTA3 :	11391450
OKUNO1 :	26086
OKUNO2 :	15254
OKUNO3 :	23148
F3PPB T :	1
LIVE TGT NAI :	1677857
LIVE TGT BAF :	64099
LIVE MOMOTA :	566
LIVE OKUNO :	10
LIVE FC :	87796
LIVE MOMOTA1 :	163408
LIVE MOMOTA2 :	12787130
LIVE MOMOTA3 :	10910085
LIVE OKUNO1 :	24980
LIVE OKUNO2 :	14580
LIVE OKUNO3 :	22184
LIVE_CLOCK :	138593

6:04, 04 20:41

prisca

Run49

Start -- Fri Jun 4 20:37:16 2004  
Stop -- Fri Jun 4 20:41:09 2004

Scaler Name	Total
UNGATED	24034
GATED	24034
NONE	394
F1PP T	2
F2 SI	0
CLEARs	24035
F2PP T	104658
F3PPA T	26
E1	356
PL 2	0
PL 3	1
CLOCK	232065
TGT NAI	1418819
TGT BAF	52999
MOMOTA	482
OKUNO	6
FC	73561
MOMOTA1	215708
MOMOTA2	21050398
MOMOTA3	18183551
OKUNO1	20868
OKUNO2	12009
OKUNO3	18707
F3PPB T	3
LIVE TGT NAI	1357916
LIVE TGT BAF	50876
LIVE MOMOTA	463
LIVE OKUNO	5
LIVE FC	70439
LIVE MOMOTA1	206653
LIVE MOMOTA2	20161514
LIVE MOMOTA3	17412718
LIVE OKUNO1	19977
LIVE OKUNO2	11497
LIVE OKUNO3	17946
LIVE CLOCK	231562

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prisca

Run50

Start -- Fri Jun 4 20:43:21 2004  
Stop -- Fri Jun 4 20:46:40 2004

Scaler Name	Total
UNGATED	20862
GATED	20862
NONE	342
F1PP T	5
F2 SI	0
CLEARs	20863
F2PP T	89829
F3PPA T	26
E1	245
PL 2	1
PL 3	0
CLOCK	198248
TGT NAI	713389
TGT BAF	27186
MOMOTA	234
OKUNO	5
FC	104408
MOMOTA1	167194
MOMOTA2	17577108
MOMOTA3	15305888
OKUNO1	10752
OKUNO2	6247
OKUNO3	9408
F3PPB T	2
LIVE TGT NAI	682163
LIVE TGT BAF	25964
LIVE MOMOTA	225
LIVE OKUNO	5
LIVE FC	99932
LIVE MOMOTA1	159865
LIVE MOMOTA2	16822144
LIVE MOMOTA3	14647015
LIVE OKUNO1	10280
LIVE OKUNO2	5963
LIVE OKUNO3	8988
LIVE CLOCK	197477

6:04, 04 20:52

prisca

Run51

Start -- Fri Jun 4 20:47:55 2004  
Stop -- Fri Jun 4 20:52:46 2004

Scaler Name	Total
UNGATED	30134
GATED	30134
NONE	494
F1PP T	7
F2 SI	0
CLEARs	30135
F2PP T	131677
F3PPA T	47
E1	390
PL 2	1
PL 3	1
CLOCK	291336
TGT NAI	279134
TGT BAF	10782
MOMOTA	95
OKUNO	1
FC	80894
MOMOTA1	214538
MOMOTA2	25223313
MOMOTA3	22081281
OKUNO1	4303
OKUNO2	2593
OKUNO3	3987
F3PPB T	3
LIVE TGT NAI	267258
LIVE TGT BAF	10349
LIVE MOMOTA	92
LIVE OKUNO	0
LIVE FC	77371
LIVE MOMOTA1	205544
LIVE MOMOTA2	24151788
LIVE MOMOTA3	21144737
LIVE OKUNO1	4112
LIVE OKUNO2	2498
LIVE OKUNO3	3798
LIVE CLOCK	290729

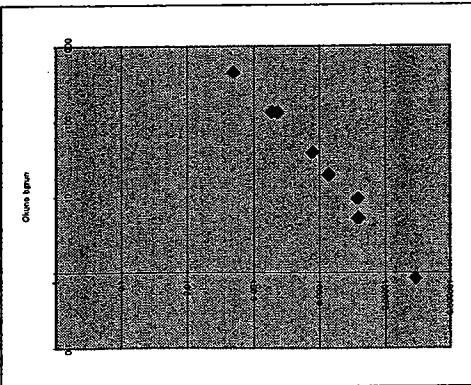
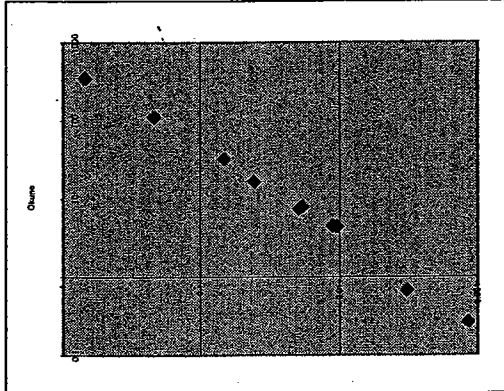
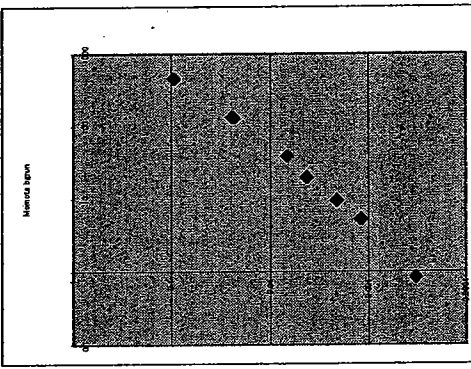
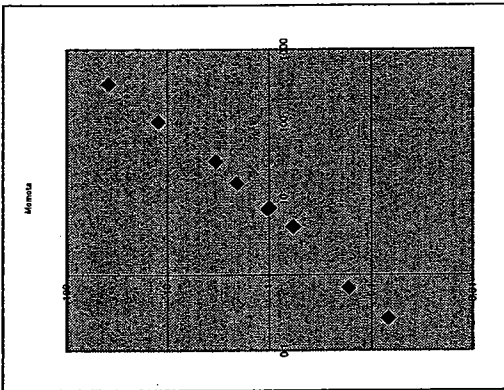
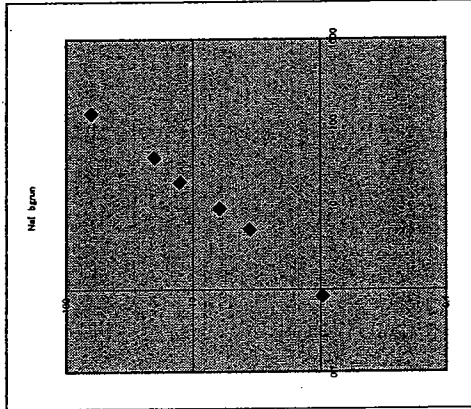
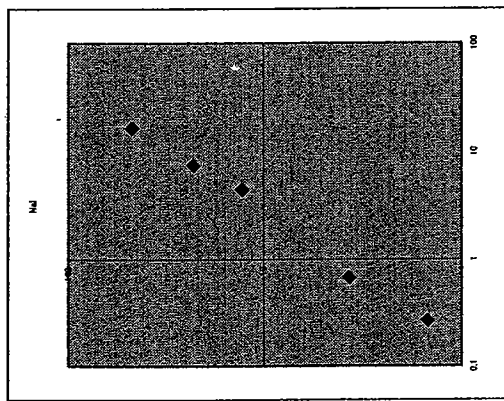
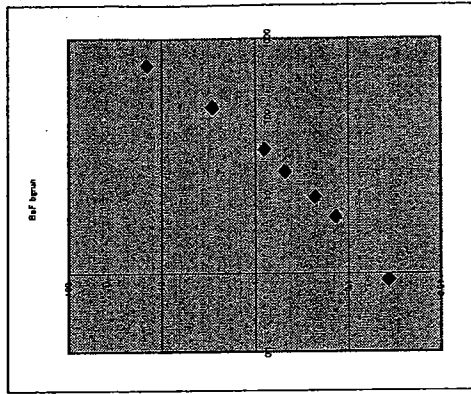
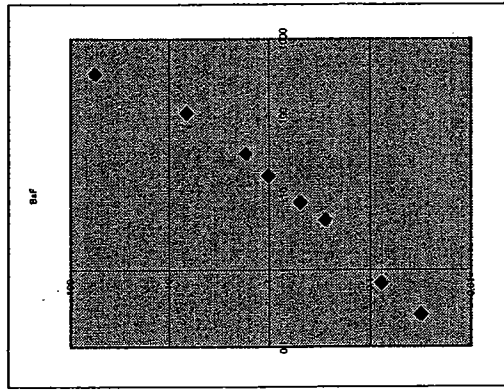
6:04, 04 21:05

prisca

Run52

Start -- Fri Jun 4 20:54:40 2004  
Stop -- Fri Jun 4 21:04:40 2004

Scaler Name	Total
UNGATED	61854
GATED	61854
NONE	1014
F1PP T	17
F2 SI	0
CLEARs	61855
F2PP T	270048
F3PPA T	81
E1	806
PL 2	0
PL 3	1
CLOCK	598277
TGT NAI	362559
TGT BAF	15186
MOMOTA	130
OKUNO	1
FC	109652
MOMOTA1	437390
MOMOTA2	51558576
MOMOTA3	45062919
OKUNO1	5938
OKUNO2	3458
OKUNO3	5508
F3PPB T	15
LIVE TGT NAI	347081
LIVE TGT BAF	14544
LIVE MOMOTA	122
LIVE OKUNO	1
LIVE FC	104907
LIVE MOMOTA1	418821
LIVE MOMOTA2	49372897
LIVE MOMOTA3	43153203
LIVE OKUNO1	5695
LIVE OKUNO2	3298
LIVE OKUNO3	5285
LIVE CLOCK	597009



Magnet Parameter	
Parameter	Ratio
Q1	1.3167
Q2	1.5337
Q3	0.7725
SX1	0.0000
D1	0.2777
SX2	0.0000
Q4	0.5572
Q5	0.7942
Q6	0.6197
SX3	0.0000
D2	0.2777
SX4	0.0000
Q7	0.6468
Q8	1.1259
Q9	1.0222
Q10	1.2271
Q11	1.4596
Q12	1.0958

exit

Run #	Beam I	I-messrange	Tgt	PaF
53	0.4	3	Be 92	1450
54	0.7	3	)	135
55	2	3	)	)
56	-	-	Junk	-
57	105	10		
58		1000		
59	2.10		Be 166	)



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prisca

Run53

Start -- Fri Jun 4 21:09:22 2004  
Stop -- Fri Jun 4 21:16:22 2004

Scaler Name :	Total
UNGATED :	43188
GATED :	43188
NONE :	708
F1PP T :	17
F2 SI :	0
CLEARs :	43189
F2PP T :	189335
F3PPA T :	64
E1 :	699
PL 2 :	1
PL 3 :	5
CLOCK :	418460
TGT NAI :	748786
TGT BAF :	14245
MOMOTA :	23198
OKUNO :	516
FC :	54020
MOMOTA1 :	330737
MOMOTA2 :	36140554
MOMOTA3 :	31592747
OKUNO1 :	20057
OKUNO2 :	5309
OKUNO3 :	5216
F3PPB T :	21
LIVE TGT NAI :	717025
LIVE TGT BAF :	13619
LIVE MOMOTA :	22214
LIVE OKUNO :	491
LIVE FC :	51742
LIVE MOMOTA1 :	316814
LIVE MOMOTA2 :	34612584
LIVE MOMOTA3 :	30256315
LIVE OKUNO1 :	19222
LIVE OKUNO2 :	5098
LIVE OKUNO3 :	4994
LIVE_CLOCK :	417625

6-04 04 21:27

prisca

Run54

Start -- Fri Jun 4 21:23:08 2004  
Stop -- Fri Jun 4 21:27:19 2004

Scaler Name :	Total
UNGATED :	25864
GATED :	25864
NONE :	424
F1PP T :	5
F2 SI :	0
CLEARs :	25865
F2PP T :	112564
F3PPA T :	44
E1 :	377
PL 2 :	0
PL 3 :	2
CLOCK :	249898
TGT NAI :	795146
TGT BAF :	6116
MOMOTA :	24607
OKUNO :	526
FC :	57771
MOMOTA1 :	219360
MOMOTA2 :	21813017
MOMOTA3 :	19083856
OKUNO1 :	21203
OKUNO2 :	5747
OKUNO3 :	5466
F3PPB T :	14
LIVE TGT NAI :	761123
LIVE TGT BAF :	5834
LIVE MOMOTA :	23572
LIVE OKUNO :	503
LIVE FC :	55256
LIVE MOMOTA1 :	209916
LIVE MOMOTA2 :	20890596
LIVE MOMOTA3 :	18274628
LIVE OKUNO1 :	20280
LIVE OKUNO2 :	5474
LIVE OKUNO3 :	5217
LIVE_CLOCK :	249365

6-04 04 21:32

prisca

Run55

Start -- Fri Jun 4 21:28:26 2004  
Stop -- Fri Jun 4 21:32:10 2004

Scaler Name :	Total
UNGATED :	23058
GATED :	23058
NONE :	378
F1PP T :	4
F2 SI :	0
CLEARs :	23059
F2PP T :	100779
F3PPA T :	42
E1 :	329
PL 2 :	0
PL 3 :	0
CLOCK :	224300
TGT NAI :	2118567
TGT BAF :	9733
MOMOTA :	64817
OKUNO :	1448
FC :	147195
MOMOTA1 :	279921
MOMOTA2 :	20443554
MOMOTA3 :	17903202
OKUNO1 :	56313
OKUNO2 :	14866
OKUNO3 :	14311
F3PPB T :	30
LIVE TGT NAI :	2028831
LIVE TGT BAF :	9304
LIVE MOMOTA :	62075
LIVE OKUNO :	1374
LIVE FC :	141058
LIVE MOMOTA1 :	268317
LIVE MOMOTA2 :	19587813
LIVE MOMOTA3 :	17149363
LIVE OKUNO1 :	53923
LIVE OKUNO2 :	14214
LIVE OKUNO3 :	13742
LIVE_CLOCK :	223908

6-04 04 21:40

prisca

Run57

Start -- Fri Jun 4 21:38:03 2004  
Stop -- Fri Jun 4 21:40:16 2004

Scaler Name :	Total
UNGATED :	13542
GATED :	13542
NONE :	222
F1PP T :	2
F2 SI :	0
CLEARs :	13543
F2PP T :	60336
F3PPA T :	17
E1 :	171
PL 2 :	0
PL 3 :	0
CLOCK :	132682
TGT NAI :	1691788
TGT BAF :	7866
MOMOTA :	51629
OKUNO :	1182
FC :	65161
MOMOTA1 :	191525
MOMOTA2 :	12418109
MOMOTA3 :	10878348
OKUNO1 :	44608
OKUNO2 :	11866
OKUNO3 :	11313
F3PPB T :	7
LIVE TGT NAI :	1619834
LIVE TGT BAF :	7526
LIVE MOMOTA :	49399
LIVE OKUNO :	1138
LIVE FC :	62380
LIVE MOMOTA1 :	183485
LIVE MOMOTA2 :	11899827
LIVE MOMOTA3 :	10421367
LIVE OKUNO1 :	42680
LIVE OKUNO2 :	11365
LIVE OKUNO3 :	10876
LIVE_CLOCK :	132509

Run58

Start -- Fri Jun 4 21:42:17 2004  
Stop -- Fri Jun 4 21:42:36 2004

Scaler Name : Total

UNGATED :	1952
GATED :	1952
NONE :	32
F1PP T :	0
F2 SI :	0
CLEARs :	1953
F2PP T :	8512
F3PPA T :	3
E1 :	31
PL 2 :	0
PL 3 :	0
CLOCK :	19003
TGT NAI :	3487555
TGT BAF :	52767
MOMOTA :	303210
OKUNO :	5955
FC :	4557
MOMOTA1 :	545014
MOMOTA2 :	9185119
MOMOTA3 :	7712883
OKUNO1 :	240992
OKUNO2 :	63672
OKUNO3 :	59591
F3PPB T :	1
LIVE TGT NAI :	3340545
LIVE TGT BAF :	50443
LIVE MOMOTA :	289789
LIVE OKUNO :	5701
LIVE FC :	4365
LIVE MOMOTA1 :	521651
LIVE MOMOTA2 :	8828647
LIVE MOMOTA3 :	7386363
LIVE OKUNO1 :	230224
LIVE OKUNO2 :	60892
LIVE OKUNO3 :	57333
LIVE_CLOCK :	18971

Run59

Start -- Fri Jun 4 21:59:05 2004  
Stop -- Fri Jun 4 21:59:53 2004

Scaler Name : Total

UNGATED :	4880
GATED :	4880
NONE :	80
F1PP T :	1
F2 SI :	0
CLEARs :	4881
F2PP T :	21281
F3PPA T :	3
E1 :	46
PL 2 :	1
PL 3 :	0
CLOCK :	47230
TGT NAI :	17786
TGT BAF :	85
MOMOTA :	1303
OKUNO :	118
FC :	5195
MOMOTA1 :	31451
MOMOTA2 :	4012855
MOMOTA3 :	3504978
OKUNO1 :	2112
OKUNO2 :	573
OKUNO3 :	352
F3PPB T :	3
LIVE TGT NAI :	17042
LIVE TGT BAF :	83
LIVE MOMOTA :	1245
LIVE OKUNO :	111
LIVE FC :	4989
LIVE MOMOTA1 :	30054
LIVE MOMOTA2 :	3843494
LIVE MOMOTA3 :	3357079
LIVE OKUNO1 :	2017
LIVE OKUNO2 :	548
LIVE OKUNO3 :	337
LIVE_CLOCK :	47135

Junk.  
: Beam stopped during the RUN.



22:08

prisca

Fri Jun 4 22:01:19 2004  
Fri Jun 4 22:08:00 2004

Scaler Name :	Total
UNGATED :	41236
GATED :	41236
NONE :	676
F1PP T :	12
F2 SI :	0
CLEARs :	41237
F2PP T :	180025
F3PPA T :	51
E1 :	433
PL 2 :	1
PL 3 :	2
CLOCK :	400299
TGT NAI :	180412
TGT BAF :	1118
MOMOTA :	12685
OKUNO :	1175
FC :	55127
MOMOTA1 :	261216
MOMOTA2 :	33987297
MOMOTA3 :	29659822
OKUNO1 :	21011
OKUNO2 :	5528
OKUNO3 :	3643
F3PPB T :	85
LIVE TGT NAI :	172929
LIVE TGT BAF :	1071
LIVE MOMOTA :	12147
LIVE OKUNO :	1130
LIVE FC :	52747
LIVE MOMOTA1 :	250222
LIVE MOMOTA2 :	32552231
LIVE MOMOTA3 :	28407417
LIVE OKUNO1 :	20135
LIVE OKUNO2 :	5292
LIVE OKUNO3 :	3487
LIVE_CLOCK :	399552

6:04, 04 22:13

prisca

Run61

Start -- Fri Jun 4 22:09:16 2004  
Stop -- Fri Jun 4 22:13:09 2004

Scaler Name :	Total
UNGATED :	24156
GATED :	24156
NONE :	396
F1PP T :	2
F2 SI :	0
CLEARs :	24157
F2PP T :	104794
F3PPA T :	39
E1 :	250
PL 2 :	1
PL 3 :	0
CLOCK :	231909
TGT NAI :	192164
TGT BAF :	1210
MOMOTA :	13917
OKUNO :	1222
FC :	55604
MOMOTA1 :	165833
MOMOTA2 :	19841550
MOMOTA3 :	17324826
OKUNO1 :	22596
OKUNO2 :	5900
OKUNO3 :	3764
F3PPB T :	27
LIVE TGT NAI :	184018
LIVE TGT BAF :	1163
LIVE MOMOTA :	13285
LIVE OKUNO :	1183
LIVE FC :	53261
LIVE MOMOTA1 :	158672
LIVE MOMOTA2 :	18996294
LIVE MOMOTA3 :	16585686
LIVE OKUNO1 :	21693
LIVE OKUNO2 :	5661
LIVE OKUNO3 :	3621
LIVE_CLOCK :	231273

04, 04 22:17

prisca

52

t -- Fri Jun 4 22:14:21 2004  
p -- Fri Jun 4 22:16:58 2004

Scaler Name :	Total
UNGATED :	16226
GATED :	16226
NONE :	266
F1PP T :	4
F2 SI :	0
CLEARs :	16227
F2PP T :	70487
F3PPA T :	27
E1 :	237
PL 2 :	0
PL 3 :	0
CLOCK :	156748
TGT NAI :	261093
TGT BAF :	1699
MOMOTA :	18918
OKUNO :	1624
FC :	66360
MOMOTA1 :	140967
MOMOTA2 :	13741988
MOMOTA3 :	12017407
OKUNO1 :	30214
OKUNO2 :	7740
OKUNO3 :	5066
F3PPB T :	2
LIVE TGT NAI :	249852
LIVE TGT BAF :	1627
LIVE MOMOTA :	18103
LIVE OKUNO :	1553
LIVE FC :	63545
LIVE MOMOTA1 :	135087
LIVE MOMOTA2 :	13162716
LIVE MOMOTA3 :	11509427
LIVE OKUNO1 :	28941
LIVE OKUNO2 :	7401
LIVE OKUNO3 :	4851
LIVE_CLOCK :	156412

6:04, 04 22:19

prisca

Run63

Start -- Fri Jun 4 22:18:04 2004  
Stop -- Fri Jun 4 22:19:15 2004

Scaler Name :	Total
UNGATED :	7320
GATED :	7320
NONE :	120
F1PP T :	2
F2 SI :	0
CLEARs :	7321
F2PP T :	31376
F3PPA T :	16
E1 :	109
PL 2 :	0
PL 3 :	0
CLOCK :	70342
TGT NAI :	200957
TGT BAF :	1310
MOMOTA :	14347
OKUNO :	1307
FC :	49115
MOMOTA1 :	75785
MOMOTA2 :	6294393
MOMOTA3 :	5512478
OKUNO1 :	23173
OKUNO2 :	6085
OKUNO3 :	3946
F3PPB T :	1
LIVE TGT NAI :	192563
LIVE TGT BAF :	1258
LIVE MOMOTA :	13757
LIVE OKUNO :	1258
LIVE FC :	47028
LIVE MOMOTA1 :	72475
LIVE MOMOTA2 :	6026976
LIVE MOMOTA3 :	5276807
LIVE OKUNO1 :	22193
LIVE OKUNO2 :	5814
LIVE OKUNO3 :	3786
LIVE_CLOCK :	70156

Parameter	Brho
Q1	1.3167
Q2	1.5337
Q3	0.7725
SX1	0.0000
D1	0.2777
SX2	0.0000
Q4	0.5572
Q5	0.7942
Q6	0.6197
SX3	0.0000
D2	0.2777
SX4	0.0000
Q7	0.6468
Q8	1.1259
Q9	1.0222
Q10	1.2271
Q11	1.4596
Q12	1.0958

exit

Run#	Beam I	I-meter range	Tot Ta (V)	BaF (V)	N (V)
60	0.13	1	12	352	61
61	0.24	1	11	11	11
62	0.41	1	11	11	11
63	0.70	1	11	11	11
64	1.15	3	11	11	11
65	2.80	3	11	11	11
66	12	30	11	11	10
67	50	300	11	11	11
68	250	1000	11	11	11
69	4.3	3	11	11	60
70	6	20	Be (92)	11	11
71	12	30	11	11	11
72	<del>19.5</del>	<del>30</del>	11	11	11
73	25	100	11	11	11
74	50	100	11	11	11
75	105	300	11	11	11
76	190	300	11	11	11

# Debugging tasks

Set gains for Silicon: put beam pick in following channel

F2: 1084  
 $\Delta E_{low}$ : ~~3616~~ 144635 ← noise is 35% (P+D) - 3000 = 1017 ✓  
 $\Delta E_{high}$ : 3617 70 noise is 70% - 1200<sub>GeV</sub> = 8.4 ✓  
 E1: 2090  
 E2: 3465  
 E3: 444  
 E4: 0 ← no signal

check threshold for E1: threshold for E1 = 15 MeV

set pulser rate to 1/s if not done before:  terminal off  
 check if done

~~check~~ check silicon ADC gate vs. signal, mark Timing diagram ✓

check Amplitude of PPAC<sup>linear</sup> signals for beam:      % Full scale

check Amplitude of Plastic signals for beam:      % Full scale  
 Not measured. Can be seen from spectra

check scalers: are they coming in?

compare Linc vs. RAW:  check if done

Set voltages on monitors:

compare FP2T to FP3T for ppacs:  for plastics:

compare ungated vs. gated:

Look at Pile up rejection circuit mainly saturated signals or  $\Delta E_{high}$   
 and some pickup, seems to be working on  $\Delta E_{high}$   
 nothing on  $\Delta E_{low}$ ; don't know with E2, nothing for E3 or E4  
 check if pulser bit works not in use during run

Set thresholds for monitors  w.l.

6-104, 04 22:23		prisca	
Run64			
Start -- Fri Jun 4 22:21:11 2004			
Stop -- Fri Jun 4 22:23:17 2004			
Scaler Name :		Total	
UNGATED :	12810		
GATED :	12810		
NONE :	210		
F1PP T :	2		
F2 SI :	0		
CLEARs :	12811		
F2PP T :	55947		
F3PPA T :	17		
E1 :	178		
PL 2 :	0		
PL 3 :	1		
CLOCK :	124627		
→ TGT NAI :	262749		
→ TGT BAF :	1684		
→ MOMOTA :	19440		
→ OKUNO :	1668		
→ FC :	46920		
MOMOTA1 :	124689		
MOMOTA2 :	11044797		
MOMOTA3 :	9666700		
OKUNO1 :	30294		
OKUNO2 :	7955		
OKUNO3 :	5191		
F3PPB T :	1		
LIVE TGT NAI :	251508		
LIVE TGT BAF :	1611		
LIVE MOMOTA :	18594		
LIVE OKUNO :	1593		
LIVE FC :	44963		
LIVE MOMOTA1 :	119380		
LIVE MOMOTA2 :	10579266		
LIVE MOMOTA3 :	9258076		
LIVE OKUNO1 :	28996		
LIVE OKUNO2 :	7612		
LIVE OKUNO3 :	4983		
→ LIVE_CLOCK :	124409		

6-104, 04 22:25		prisca	
Run65			
Start -- Fri Jun 4 22:24:20 2004			
Stop -- Fri Jun 4 22:25:46 2004			
Scaler Name :		Total	
UNGATED :	8784		
GATED :	8784		
NONE :	144		
F1PP T :	2		
F2 SI :	0		
CLEARs :	8785		
F2PP T :	38867		
F3PPA T :	12		
E1 :	128		
PL 2 :	0		
PL 3 :	0		
CLOCK :	85969		
TGT NAI :	591279		
TGT BAF :	3756		
MOMOTA :	42318		
OKUNO :	3790		
→ FC :	78042		
MOMOTA1 :	139327		
MOMOTA2 :	8166729		
MOMOTA3 :	7173191		
OKUNO1 :	67804		
OKUNO2 :	17774		
OKUNO3 :	11433		
F3PPB T :	1		
LIVE TGT NAI :	565685		
LIVE TGT BAF :	3576		
LIVE MOMOTA :	40405		
LIVE OKUNO :	3634		
LIVE FC :	74784		
LIVE MOMOTA1 :	133471		
LIVE MOMOTA2 :	7822595		
LIVE MOMOTA3 :	6868615		
LIVE OKUNO1 :	64922		
LIVE OKUNO2 :	17019		
LIVE OKUNO3 :	10990		
→ LIVE_CLOCK :	85857		

6-104, 04 22:30		prisca	
Run66			
Start -- Fri Jun 4 22:29:11 2004			
Stop -- Fri Jun 4 22:30:14 2004			
Scaler Name :		Total	
UNGATED :	6466		
GATED :	6466		
NONE :	106		
F1PP T :	1		
F2 SI :	0		
CLEARs :	6467		
F2PP T :	28027		
F3PPA T :	10		
E1 :	104		
PL 2 :	0		
PL 3 :	0		
CLOCK :	62288		
TGT NAI :	1		
TGT BAF :	5024		
→ MOMOTA :	56618		
→ OKUNO :	5028		
→ FC :	26365		
MOMOTA1 :	146239		
MOMOTA2 :	6394962		
MOMOTA3 :	5627413		
OKUNO1 :	90586		
OKUNO2 :	23745		
OKUNO3 :	15144		
F3PPB T :	1		
LIVE TGT NAI :	1		
LIVE TGT BAF :	4797		
LIVE MOMOTA :	54151		
LIVE OKUNO :	4812		
LIVE FC :	25282		
LIVE MOMOTA1 :	140044		
LIVE MOMOTA2 :	6132372		
LIVE MOMOTA3 :	5390106		
LIVE OKUNO1 :	86641		
LIVE OKUNO2 :	22751		
LIVE OKUNO3 :	14542		
→ LIVE_CLOCK :	62194		

6-104, 04 22:33		prisca	
Run67			
Start -- Fri Jun 4 22:31:57 2004			
Stop -- Fri Jun 4 22:33:01 2004			
Scaler Name :		Total	
UNGATED :	6588		
GATED :	6588		
NONE :	108		
F1PP T :	1		
F2 SI :	0		
CLEARs :	6589		
F2PP T :	28673		
F3PPA T :	9		
E1 :	76		
PL 2 :	0		
PL 3 :	1		
CLOCK :	63556		
TGT NAI :	0		
TGT BAF :	15955		
MOMOTA :	177754		
OKUNO :	15864		
FC :	10183		
MOMOTA1 :	363368		
MOMOTA2 :	8776796		
MOMOTA3 :	7842655		
OKUNO1 :	286516		
OKUNO2 :	75400		
OKUNO3 :	48380		
F3PPB T :	1		
LIVE TGT NAI :	0		
LIVE TGT BAF :	15283		
LIVE MOMOTA :	170217		
LIVE OKUNO :	15190		
LIVE FC :	9774		
LIVE MOMOTA1 :	347979		
LIVE MOMOTA2 :	8426098		
LIVE MOMOTA3 :	7514136		
LIVE OKUNO1 :	274368		
LIVE OKUNO2 :	72226		
LIVE OKUNO3 :	46292		
LIVE_CLOCK :	63415		

6:04.04.22:37

prisca

Run68

Start -- Fri Jun 4 22:36:36 2004  
Stop -- Fri Jun 4 22:36:54 2004

Scaler Name : Total

UNGATED :	1708
GATED :	1708
NONE :	28
F1PP T :	0
F2 SI :	0
CLEARs :	1709
F2PP T :	7721
F3PPA T :	5
E1 :	133
PL 2 :	0
PL 3 :	0
CLOCK :	17078
TGT NAI :	1
TGT BAF :	24702
MOMOTA :	272820
OKUNO :	21900
FC :	4314
MOMOTA1 :	454686
MOMOTA2 :	7292709
MOMOTA3 :	6212442
OKUNO1 :	408837
OKUNO2 :	105744
OKUNO3 :	67792
F3PPB T :	0
LIVE TGT NAI :	1
LIVE TGT BAF :	23705
LIVE MOMOTA :	261909
LIVE OKUNO :	20993
LIVE FC :	4144
LIVE MOMOTA1 :	436783
LIVE MOMOTA2 :	7032578
LIVE MOMOTA3 :	5968109
LIVE OKUNO1 :	391968
LIVE OKUNO2 :	101358
LIVE OKUNO3 :	65511
LIVE_CLOCK :	17078

Ta target  
was "not"  
lighting  
en

6:04.04.22:57

prisca

Run69

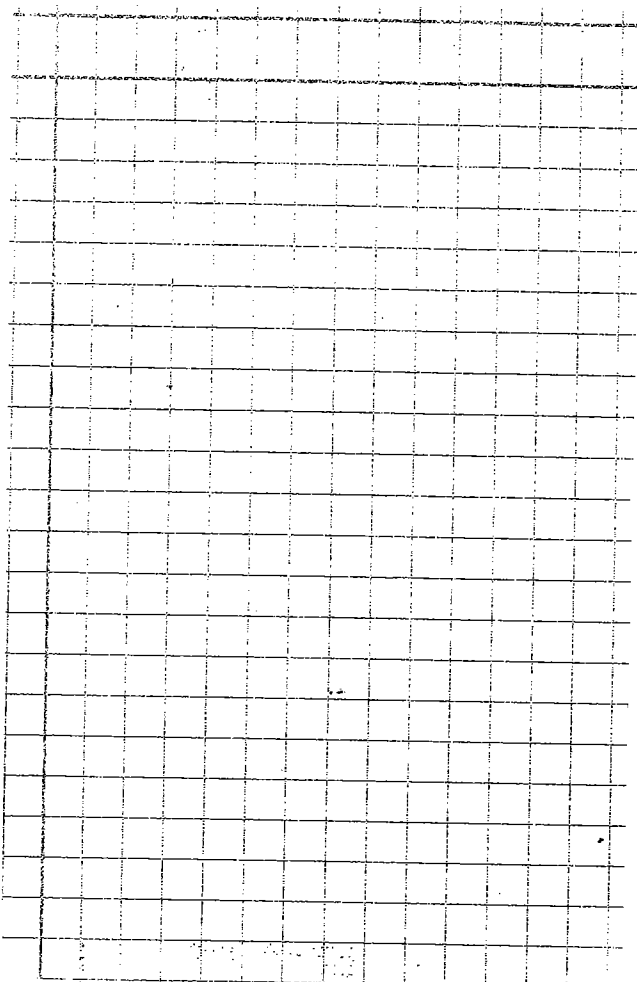
Start -- Fri Jun 4 22:56:05 2004  
Stop -- Fri Jun 4 22:57:37 2004

Scaler Name : Total

UNGATED :	9516
GATED :	9516
NONE :	156
F1PP T :	3
F2 SI :	0
CLEARs :	9517
F2PP T :	41339
F3PPA T :	13
E1 :	136
PL 2 :	0
PL 3 :	0
CLOCK :	91567
TGT NAI :	277906
TGT BAF :	1382
MOMOTA :	15663
OKUNO :	1304
FC :	39166
MOMOTA1 :	92818
MOMOTA2 :	8134113
MOMOTA3 :	7125800
OKUNO1 :	25059
OKUNO2 :	6574
OKUNO3 :	4191
F3PPB T :	2
LIVE TGT NAI :	266044
LIVE TGT BAF :	1311
LIVE MOMOTA :	14989
LIVE OKUNO :	1263
LIVE FC :	37473
LIVE MOMOTA1 :	88804
LIVE MOMOTA2 :	7786882
LIVE MOMOTA3 :	6820903
LIVE OKUNO1 :	24018
LIVE OKUNO2 :	6292
LIVE OKUNO3 :	4001
LIVE_CLOCK :	91348

Ta(66)

Ru  
St  
St



04, 04 23:16 prisca

Run70  
Start -- Fri Jun 4 23:14:37 2004  
Stop -- Fri Jun 4 23:16:24 2004

Scaler Name :	Total
UNGATED :	11102
GATED :	11102
NONE :	182
F1PP T :	2
F2 SI :	0
CLEARs :	11103
F2PP T :	47856
F3PPA T :	17
E1 :	165
PL_2 :	0
PL_3 :	0
CLOCK :	106773
TGT NAI :	2090051
TGT BAF :	7465
MOMOTA :	48637
OKUNO :	1066
FC :	21625
MOMOTA1 :	169015
MOMOTA2 :	10162241
MOMOTA3 :	8937390
OKUNO1 :	42134
OKUNO2 :	11058
OKUNO3 :	10754
F3PPB T :	2
LIVE TGT NAI :	2000082
LIVE TGT BAF :	7133
LIVE MOMOTA :	46567
LIVE OKUNO :	1028
LIVE FC :	20739
LIVE MOMOTA1 :	161810
LIVE MOMOTA2 :	9735311
LIVE MOMOTA3 :	8557979
LIVE OKUNO1 :	40354
LIVE OKUNO2 :	10589
LIVE OKUNO3 :	10306
LIVE CLOCK :	106600

start  
" comment "  
Ta o.1 unit  
should be  
" Be 0.5 unit "

04, 04 23:18 prisca

-- Fri Jun 4 23:17:32 2004  
-- Fri Jun 4 23:18:43 2004

Scaler Name :	Total
UNGATED :	7320
GATED :	7320
NONE :	120
F1PP T :	1
F2 SI :	0
CLEARs :	7321
F2PP T :	32108
F3PPA T :	13
E1 :	97
PL_2 :	0
PL_3 :	0
CLOCK :	71252
TGT NAI :	0
TGT BAF :	9150
MOMOTA :	59464
OKUNO :	1298
FC :	26772
MOMOTA1 :	167740
MOMOTA2 :	7390474
MOMOTA3 :	6512620
OKUNO1 :	52031
OKUNO2 :	13864
OKUNO3 :	13182
F3PPB T :	3
LIVE TGT NAI :	0
LIVE TGT BAF :	8749
LIVE MOMOTA :	56923
LIVE OKUNO :	1237
LIVE FC :	25626
LIVE MOMOTA1 :	160609
LIVE MOMOTA2 :	7082753
LIVE MOMOTA3 :	6236500
LIVE OKUNO1 :	49735
LIVE OKUNO2 :	13244
LIVE OKUNO3 :	12662
LIVE_CLOCK :	71127

04, 04 23:21 prisca

Run72  
Start -- Fri Jun 4 23:19:55 2004  
Stop -- Fri Jun 4 23:21:06 2004

Scaler Name :	Total
UNGATED :	7198
GATED :	7198
NONE :	118
F1PP T :	3
F2 SI :	0
CLEARs :	7199
F2PP T :	31881
F3PPA T :	10
E1 :	96
PL_2 :	0
PL_3 :	0
CLOCK :	70130
TGT NAI :	0
TGT BAF :	15365
MOMOTA :	99142
OKUNO :	2216
FC :	44360
MOMOTA1 :	244211
MOMOTA2 :	8151455
MOMOTA3 :	7206278
OKUNO1 :	86227
OKUNO2 :	23004
OKUNO3 :	21753
F3PPB T :	2
LIVE TGT NAI :	0
LIVE TGT BAF :	14733
LIVE MOMOTA :	95059
LIVE OKUNO :	2129
LIVE FC :	42484
LIVE MOMOTA1 :	234297
LIVE MOMOTA2 :	7821263
LIVE MOMOTA3 :	6906164
LIVE OKUNO1 :	82629
LIVE OKUNO2 :	22059
LIVE OKUNO3 :	20814
LIVE_CLOCK :	70008

6/04/04 23:23

prisca

Run73

Start -- Fri Jun 4 23:23:03 2004  
Stop -- Fri Jun 4 23:23:51 2004

Scaler Name :	Total
UNGATED :	4880
GATED :	4880
NONE :	80
F1PP T :	4
F2 SI :	0
CLEARs :	4881
F2PP T :	21273
F3PPA T :	14
E1 :	67
PL 2 :	0
PL 3 :	1
CLOCK :	47126
TGT NAI :	0
TGT BAF :	11081
MOMOTA :	74663
OKUNO :	1656
FC :	12044
MOMOTA1 :	178208
MOMOTA2 :	5627517
MOMOTA3 :	4977043
OKUNO1 :	64554
OKUNO2 :	17220
OKUNO3 :	16080
F3PPB T :	26
LIVE TGT NAI :	0
LIVE TGT BAF :	10598
LIVE MOMOTA :	71595
LIVE OKUNO :	1568
LIVE FC :	11577
LIVE MOMOTA1 :	170805
LIVE MOMOTA2 :	5396707
LIVE MOMOTA3 :	4766130
LIVE OKUNO1 :	61785
LIVE OKUNO2 :	16447
LIVE OKUNO3 :	15418
LIVE_CLOCK :	47025

6/04/04 23:25

prisca

Run74

Start -- Fri Jun 4 23:24:30 2004  
Stop -- Fri Jun 4 23:25:05 2004

Scaler Name :	Total
UNGATED :	3538
GATED :	3538
NONE :	58
F1PP T :	2
F2 SI :	0
CLEARs :	3539
F2PP T :	15340
F3PPA T :	4
E1 :	38
PL 2 :	0
PL 3 :	0
CLOCK :	34305
TGT NAI :	0
TGT BAF :	16251
MOMOTA :	105124
OKUNO :	2433
FC :	17096
MOMOTA1 :	227193
MOMOTA2 :	5231581
MOMOTA3 :	4894688
OKUNO1 :	90889
OKUNO2 :	24364
OKUNO3 :	22729
F3PPB T :	13
LIVE TGT NAI :	0
LIVE TGT BAF :	15528
LIVE MOMOTA :	100555
LIVE OKUNO :	2332
LIVE FC :	16406
LIVE MOMOTA1 :	217529
LIVE MOMOTA2 :	5024415
LIVE MOMOTA3 :	4689907
LIVE OKUNO1 :	86982
LIVE OKUNO2 :	23335
LIVE OKUNO3 :	21817
LIVE_CLOCK :	34236

6/04/04 23:26

prisca

Run75

Start -- Fri Jun 4 23:26:02 2004  
Stop -- Fri Jun 4 23:26:36 2004

Scaler Name :	Total
UNGATED :	3416
GATED :	3416
NONE :	56
F1PP T :	2
F2 SI :	0
CLEARs :	3417
F2PP T :	14930
F3PPA T :	5
E1 :	40
PL 2 :	0
PL 3 :	1
CLOCK :	33486
TGT NAI :	0
TGT BAF :	34676
MOMOTA :	237348
OKUNO :	4576
FC :	11649
MOMOTA1 :	434233
MOMOTA2 :	8988193
MOMOTA3 :	7438594
OKUNO1 :	183751
OKUNO2 :	48903
OKUNO3 :	45423
F3PPB T :	8
LIVE TGT NAI :	0
LIVE TGT BAF :	33264
LIVE MOMOTA :	227307
LIVE OKUNO :	4367
LIVE FC :	11141
LIVE MOMOTA1 :	416090
LIVE MOMOTA2 :	8647548
LIVE MOMOTA3 :	7132985
LIVE OKUNO1 :	176096
LIVE OKUNO2 :	46823
LIVE OKUNO3 :	43385
LIVE_CLOCK :	33445

6/04/04 23:27

prisca

Run76

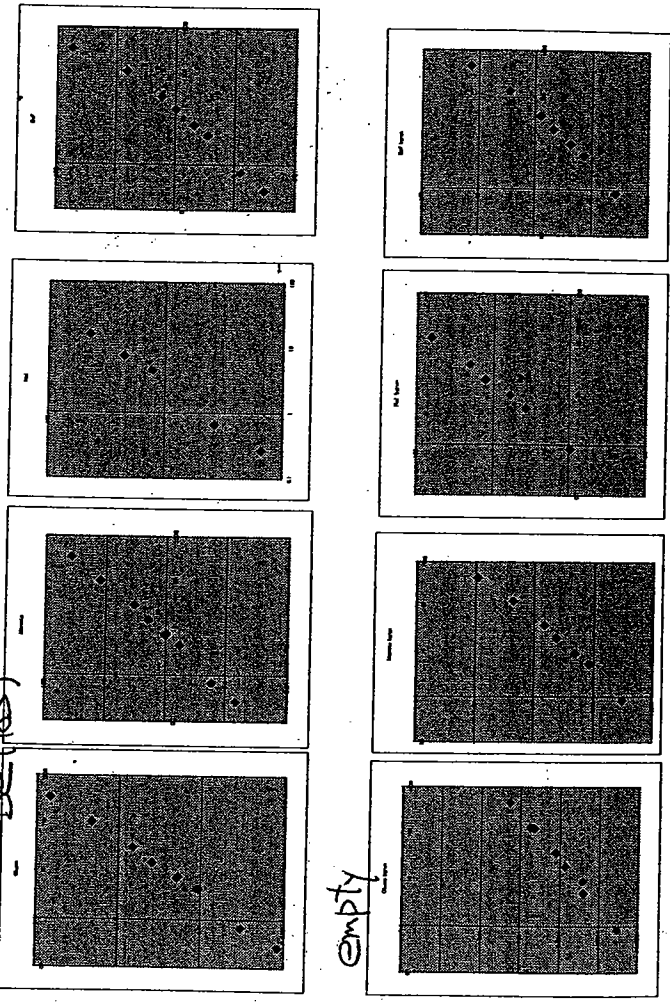
Start -- Fri Jun 4 23:27:32 2004  
Stop -- Fri Jun 4 23:27:53 2004

Scaler Name :	Total
UNGATED :	2074
GATED :	2074
NONE :	34
F1PP T :	1
F2 SI :	0
CLEARs :	2075
F2PP T :	9290
F3PPA T :	5
E1 :	28
PL 2 :	0
PL 3 :	0
CLOCK :	20736
TGT NAI :	0
TGT BAF :	41033
MOMOTA :	254250
OKUNO :	5001
FC :	12606
MOMOTA1 :	457162
MOMOTA2 :	8206158
MOMOTA3 :	6881640
OKUNO1 :	199956
OKUNO2 :	53251
OKUNO3 :	49770
F3PPB T :	1
LIVE TGT NAI :	0
LIVE TGT BAF :	39274
LIVE MOMOTA :	243232
LIVE OKUNO :	4798
LIVE FC :	12097
LIVE MOMOTA1 :	437684
LIVE MOMOTA2 :	7877244
LIVE MOMOTA3 :	6588948
LIVE OKUNO1 :	190934
LIVE OKUNO2 :	50924
LIVE OKUNO3 :	48056
LIVE_CLOCK :	20736

Be (185) and 1gt empty.

Run#	Att	I-meter	FO	Q	I	#okuno	#Moneta	#NaI	#BaF								
34	1E-01	8	58856	Be(185)	30	15402	482.006	7.83737	1089	0.018641	2.378479	57620	0.977339	124.7024	NA	27506	59.52907
35	5E-02	4.5	173632	Be(185)	10	78643	788.43	4.388031	1809	0.010419	2.38519	100580	0.579271	132.6161	NA	47288	82.32348
36	5E-02	4.5	104516	Be(185)	10	46055	480.55	4.406502	1183	0.011127	2.525242	60784	0.591576	131.9813	1325687	12.68406	2878.487
37	3E-02	0.65	344960	Be(185)	3	77302	231.906	0.672269	1119	0.003244	4.825231	57782	0.167503	249.1613	1271367	3.885636	5462.381
38	1E-02	0.3	433232	Be(185)	3	38374	115.122	0.285728	506	0.001168	4.959337	29164	0.07317	253.3312	639839	1.478897	5557.921
39	1E-01	7.5	73049	Be(185)	10	54484	544.84	7.468555	1415	0.019371	2.597093	74636	1.021725	136.9877	164.422	22.51122	3018.174
40	1E-01	18	52822	Be(185)	30	27871	88.13	15.8292	2053	0.038866	2.45539	102683	1.943944	122.8075	2359893	44.87254	2822.16
41	1E-01	33	27268	Be(185)	100	8792	879.2	32.22165	1826	0.068921	2.078688	90380	3.312321	102.768	NA	107141	8.552568
42	3E-01	110	18351	Be(185)	300	5950	1785	108.1678	3527	0.215705	1.97591	200926	12.2883	112.5638	NA	819068	56.85989
43	1E+00	380	10928	Be(185)	1000	3837	3837	351.1807	7533	0.688458	1.963253	422248	38.64617	110.0464	NA	1249241	14.18508
44	1E+00	460	84616	---	1000	43005	43005	454.5214	180	0.002008	0.004418	8916	0.094234	0.207325	NA	199472	2.88659
45	3E-01	134	89103	---	300	30805	924.5	133.7351	37	0.000535	0.004004	1669	0.024132	0.17734	8977640	64.07703	488.1221
46	3E-01	134	140107	---	300	81182	18354.8	131.0042	62	0.000443	0.003378	3255	0.023232	0.17159	3189934	20.03187	515.8307
47	1E-01	42	158715	---	100	60859	6085.9	38.83419	1088	0.008602	0.17549	1088	0.008602	0.21493	175428	12.82211	837.5781
48	8E-02	20	138838	---	30	91819	2748.57	18.79888	589	0.004242	0.21493	589	0.004242	0.21493	1418818	8.113688	642.9217
49	3E-02	9	232065	---	30	75561	2298.83	8.509534	482	0.002077	0.21493	482	0.002077	0.21493	713389	3.998468	683.2704
50	3E-02	5.3	198248	---	10	104408	1044.08	5.266535	234	0.00118	0.224121	234	0.00118	0.224121	279134	0.958117	1150.205
51	51	0.85	291338	---	3	80894	242.882	0.832997	1	3.43E-06	0.004121	95	0.000328	0.397459	392559	0.606005	1102.15
52	0	598277	---	3	108652	328.866	0.546839	0.000004	1	1.67E-06	0.000004	130	0.000217	0.39519	392559	0.606005	1102.15

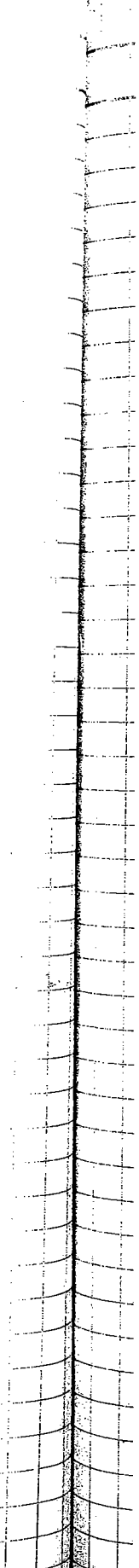
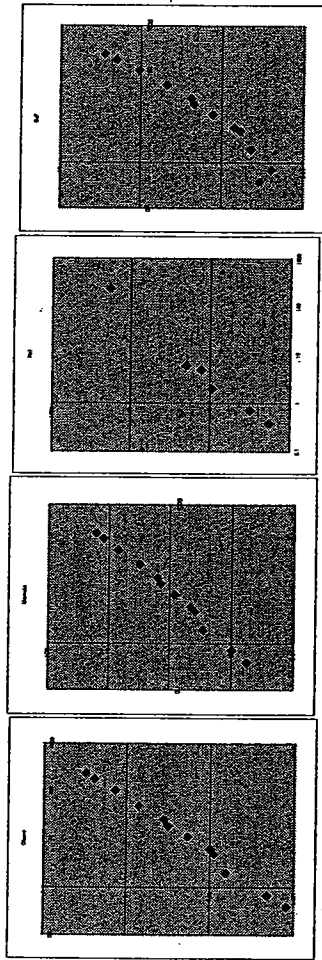
Be (185)





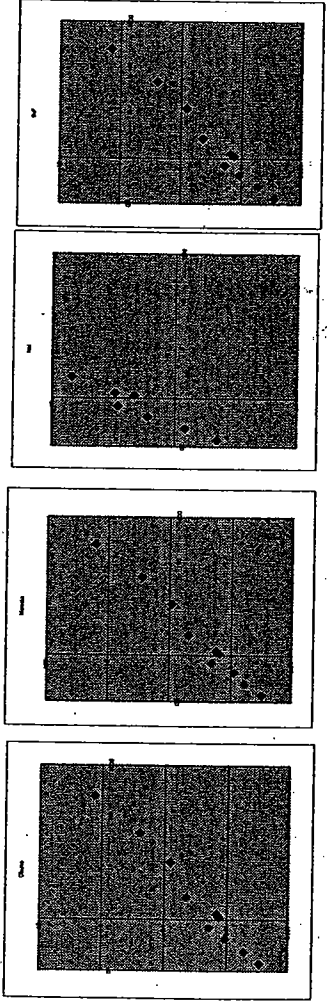
Be(42)

Run#	Att	I-meter 1kHz	enA	I-meter	FC	Q	I	#okuno	#Memota	#Nel	#BaF							
53		0.4 418460 Be(92)	54020	102.06	0.387277	518	0.001233	3184006	23198	0.055437	143.1445	748786	1.789385	4620.425	14245	0.034041	87.89854	
54		0.7 248988 Be(92)	3	57771	173.313	0.883935	526	0.002105	3034971	24607	0.098468	141.9801	795146	3.181882	4587.919	8116	0.024474	35.28876
55		2 224300 Be(92)	3	147195	441.585	1.968725	1448	0.006456	3.279057	64817	0.288975	146.7826	2118567	8.445239	4797.643	9733	0.043393	22.04108
57		5 132682 Be(92)	10	65161	857.61	4.911066	1182	0.008909	1.813968	51829	0.389118	78.23298	1691788	12.7507	2596.32	7866	0.058968	12.07164
58		240 19003 Be(92)	1000	4857	4557	239.8042	5955	0.313372	1.308781	303210	15.9559	66.5372	3487555	183.5265	765.3182	52787	2.778772	11.37953
70		6 108773 Be(92)	30	21625	848.75	6.075974	1066	0.008984	1.84316	48637	0.455518	74.97033	2090051	18.57471	3221.859	7455	0.088972	11.30674
71		12 71252 Be(92)	30	28772	803.16	11.2721	1298	0.016217	1.61616	59464	0.634559	74.03755	0	0	0	9150	0.128417	11.39225
72		19.5 70130 Be(92)	30	44360	1330.8	18.97619	2216	0.031588	1.665164	99142	1.413689	74.49805	0	0	0	15385	0.219083	11.54569
73		25 47128 Be(92)	100	12044	1204.4	25.55702	1656	0.03514	1.374958	74883	1.584327	61.99186	0	0	0	11081	0.235136	9.200432
74		50 34305 Be(92)	100	17096	1709.6	49.8353	2433	0.075923	1.42314	105124	3.064393	61.49041	0	0	0	16251	0.473721	9.505732
75		105 33488 Be(92)	300	11649	3494.7	104.363	4576	0.136654	1.308411	237348	7.087977	67.91656	0	0	0	34878	1.035537	9.922454
76		190 20738 Be(92)	300	12808	3781.8	182.3785	5001	0.241175	1.322388	254250	12.26128	67.22898	0	0	0	41033	1.978829	10.85012



Ta(166)

Run#	Att	F-meter	kHz	enA	Range	FC	Q	I	#kuma	#Moms	#NaI	#BaF								
		enA			enA	counts	[nC]	nA												
60	1/500	0.130	400289	Ta(166)	1	55127	55.127	0.137715	1175	0.002935	21.31442	12685	0.031689	230.105	180412	0.450693	372.661	1118	0.002793	20.28044
61	1/250	0.240	231809	Ta(166)	1	55604	55.604	0.239768	1222	0.005269	21.97684	13917	0.060011	250.2877	192184	0.828618	3455.938	1210	0.003218	21.76102
62	1/125	0.410	156748	Ta(166)	1	68360	68.36	0.423355	1624	0.010361	24.47257	13918	0.089782	209.7348	261083	1.665986	3934.484	1699	0.010839	25.60277
63	1/62.5	0.700	70342	Ta(166)	1	49115	49.115	0.699231	1307	0.018581	26.81101	14347	0.203981	232.1104	200957	2.866857	4091.561	1310	0.018623	26.6721
64	1/30	1.150	124827	Ta(166)	3	46920	140.76	1.123495	1868	0.013384	11.84998	19440	0.155985	138.1074	262749	2.108283	1868.645	1684	0.013512	11.98363
65	1/15	2.800	85868	Ta(166)	3	78042	234.128	2.723377	3790	0.044088	16.18788	42318	0.492247	160.7488	591279	6.877816	2525.473	3758	0.04369	16.04264
66	1/7	12.000	62268	Ta(166)	30	26385	790.85	12.88827	5028	0.080722	6.359913	58618	0.906871	71.88227				5024	0.080658	6.351855
67	1/2	50.000	63558	Ta(166)	300	10163	3084.9	46.00627	15884	0.249607	5.076485	177754	2.798609	56.18652				15955	0.251038	5.222157
68	1	250.000	17078	Ta(166)	1000	4314	4314	252.0057	21900	1.282352	5.076485	272820	15.97484	63.24061				24702	1.446422	5.726008
69		1.300	91567	Ta(166)	3	39186	117.498	1.283182	1304	0.014241	11.09808	15663	0.171065	133.3044	277906	3.035002	2385.198	1382	0.015093	11.7619



# Start Bg scanning

RIPS Control Summary 2004/06/05 00:17:23

Parameter	Value	Unit
1.3167	116.4439	116.331
1.5337	93.0273	91.603
0.7725	88.3154	88.437
0.0000	0.1469	0.000
0.2777	276.9698	278.799
0.0000	0.1469	0.000
0.5572	47.8216	47.768
0.7942	59.9494	60.036
0.6197	53.3645	53.622
0.0000	0.1469	0.000
0.2777	288.0938	287.422
0.0000	0.1469	0.000
0.6468	73.9238	74.732
1.1259	77.1951	77.435
1.0222	90.1741	90.233
1.2271	114.5853	115.905
1.4596	117.0377	115.900
1.0958	102.3117	103.336
1.7900	1.7900	0
1.7900	1.7900	

At 6/5/05 at

ency of transmission F2-F3 a 90%  
parameters →

loss appears to be halo events  
shown by the series of plots on the

1. We asked the operator to try  
capture the beam spot on target, thinking that  
S was halo of the beam. This did not  
appear to be the case. We decide to run this  
try

Magnet Parameter

Parameter	Value
1.3167	117.900
1.5337	117.900
0.7725	117.900
0.0000	117.900
0.2777	117.900
0.0000	117.900
0.5572	117.900
0.7942	117.900
0.6197	117.900
0.0000	117.900
0.2777	117.900
0.0000	117.900
0.6468	117.900
1.1259	117.900
1.0222	117.900
1.1110	117.520
1.1205	117.520
1.1105	117.520

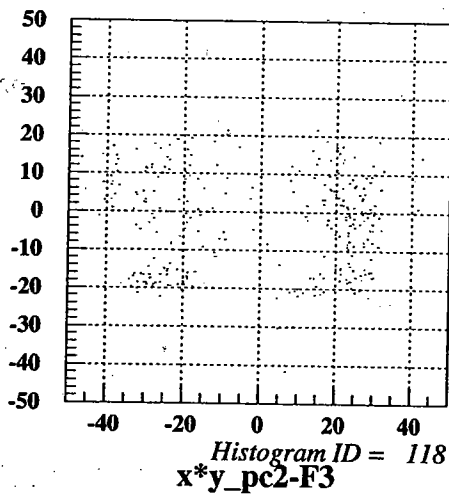
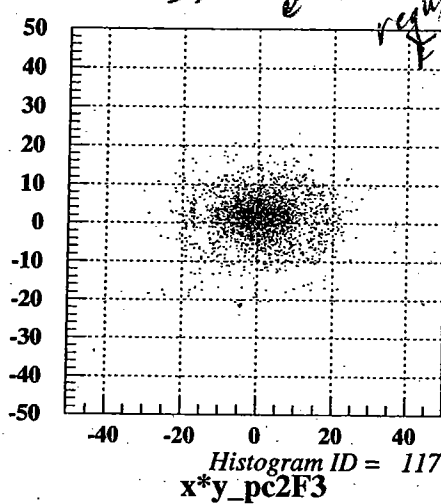
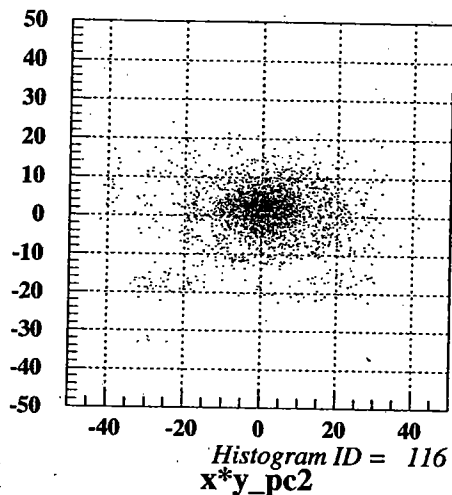
12/17

F2 PPAC  
image with  
F2 trigger

F2 PPAC  
image with  
additional  
requirement of  
F3 plastic

a)

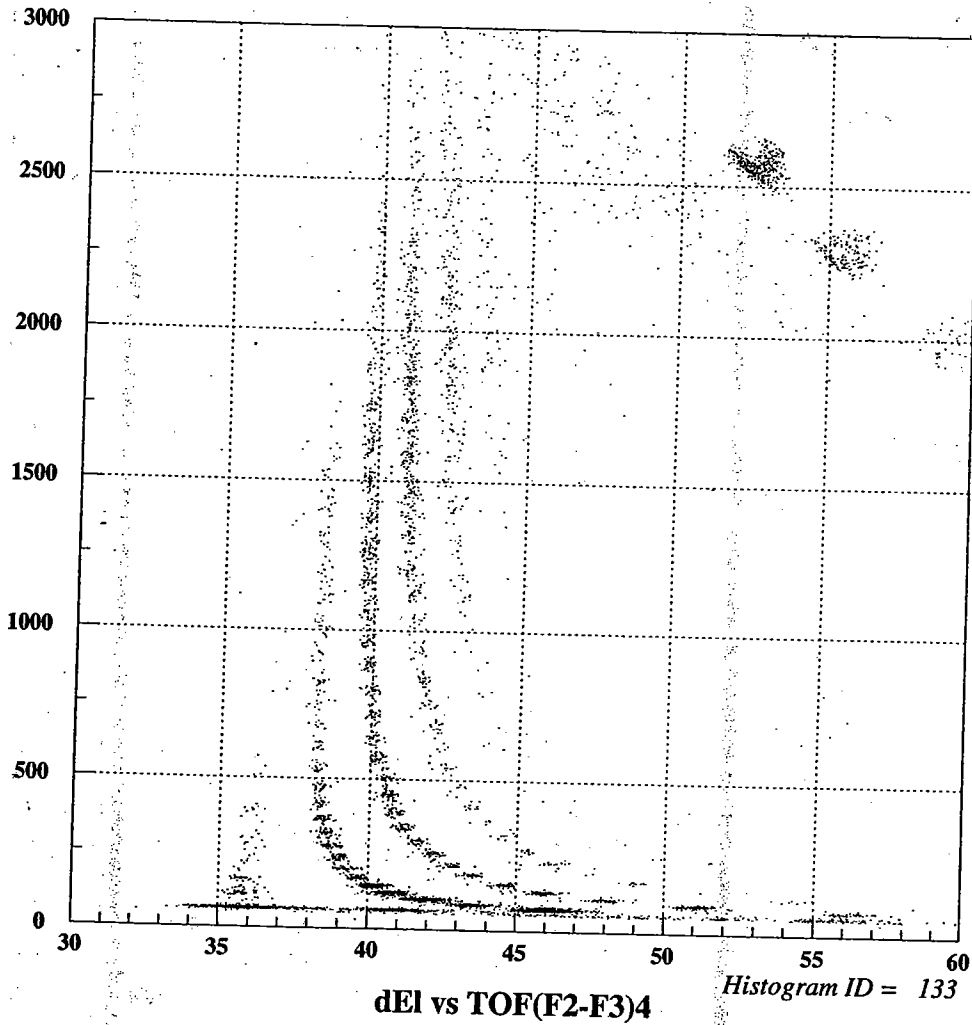
b)



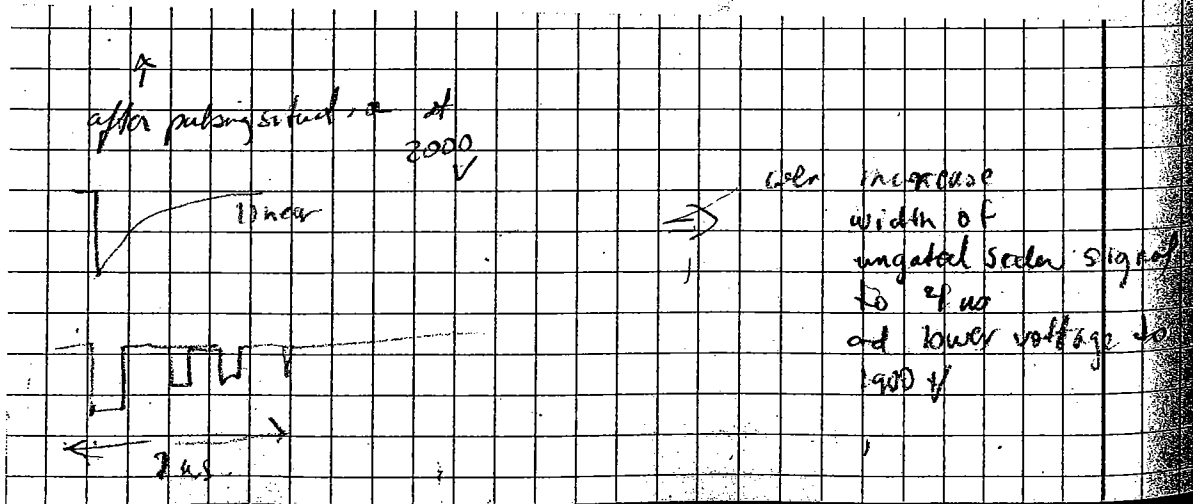
difference  
a) - b)

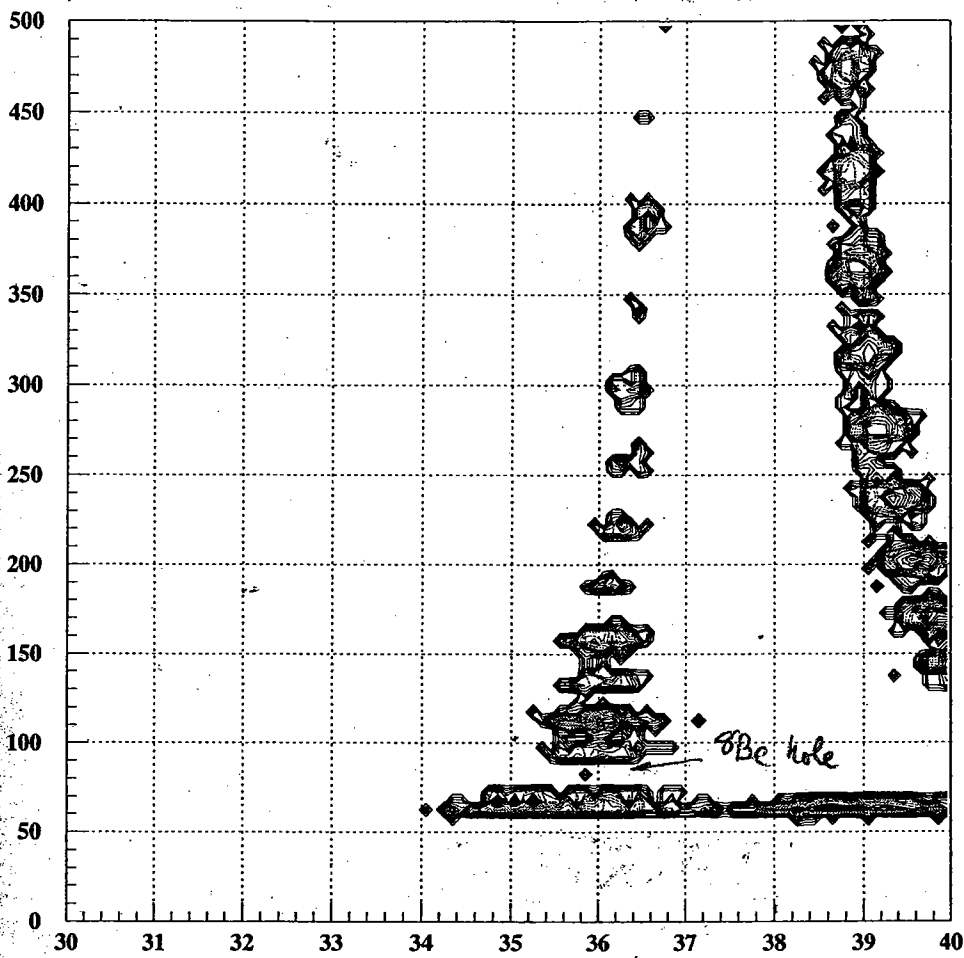
11/30 AM 6/26/05

investigating after pulses on F2 plastic - cell, which are causing  
spurious dead time. The plots on the next two pages correspond to 2000 volts  
in PMT  $\Rightarrow$  we then lower it to see if the situation improves



at Plastic at 2  
at 2000 V





T(f2-3)vσ vs SDF3-1(ch) Histogram ID = 148

⇒ looks good ⇒ we run here

Steps for Bp Scan.

0. Ask operator to reduce intensity (see note bottom left)
1. Switch to new field setting (mark previous setting as completed)
2. let magnet settle. Center NMR resonance on scope trace
3. When stable, print out the RIPS control Summary and write down NMR1 NMR2
4. raise beam until rate is beam 600 - 1000 cps in Event triggers

2:48 prisca

at Jun 5 02:18:02 2004  
at Jun 5 02:48:02 2004

Scaler Name : Total

UNGATED : 1127724  
 GATED : 890298  
 NONE : 14594  
 F1PP T : 173  
 F2 SI : 0  
 CLEARS : 890235  
 F2PP T : 942752  
 F3PPA T : 841936  
 E1 : 695165  
 PL 2 : 967721  
 RL 3 : 1020330  
 CLOCK : 1798219  
 TGT NAI : 11  
 TGT BAF : 57394  
 MOMOTA : 521291  
 OKUNO : 11324  
 FC : 4083  
 MOMOTA1 : 2169046  
 MOMOTA2 : 161696480  
 MOMOTA3 : 142809650  
 OKUNO1 : 382915  
 OKUNO2 : 82703  
 OKUNO3 : 59639  
 F3PPB T : 755555  
 LIVE TGT NAI : 10  
 LIVE TGT BAF : 45196  
 LIVE MOMOTA : 411378  
 LIVE OKUNO : 8924  
 LIVE FC : 3216  
 LIVE MOMOTA1 : 1711506  
 LIVE MOMOTA2 : 127619854  
 LIVE MOMOTA3 : 112769953  
 LIVE OKUNO1 : 301989  
 LIVE OKUNO2 : 65112  
 LIVE OKUNO3 : 46998  
 LIVE\_CLOCK : 1420970

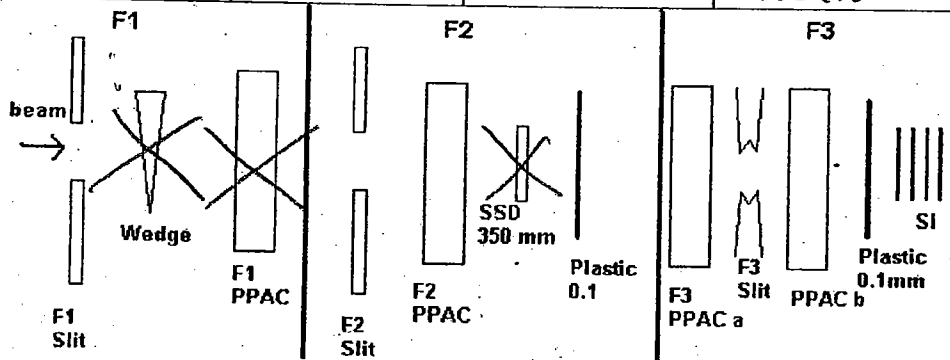
O1  
 NMR1 = 498.097  
 O2  
 NMR2 = 498.244

RIPS Control Summary			2004/06/05 02:27:19	
Beam	Rate	Beam	Rate	Rate
1.3167	116.443	116.442		
1.5337	93.0273	91.484	194.6	50.1
0.7725	88.3154	88.090		
0.0000	0.1469	0.000	24.0	50.0
0.2777	276.9698	278.799	24.0	
0.0000	0.1469	0.000	24.0	-94.8
0.5572	47.8216	47.768	23.8	-4.9
0.7942	59.9494	60.036		
0.6197	53.3645	53.513		
0.0000	0.1469	0.000		
0.2777	287.9783	287.157		
0.0000	0.1469	0.000	119.8	
0.6468	73.9238	74.651	-134.9	49.9
1.1259	77.1951	77.514	5.0	50.0
1.0222	90.1741	90.139	5.0	
1.1110	101.5278	103.002		
1.4205	111.4962	109.921		
1.1106	101.4911	102.335		
FOCUS		1.7900		
1.7900		1.7520		

Run number:	77	Tape:	5	Name:	WL
Description:	First measurement of Be				
Date:	06/05/	Time:	2.18		
Brho1:	1.790	Brho2:	1.752		
NMR1:	490.097	NMR2:	498.244		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	≈ 5 mm	F1PPAC:	IN OUT		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN OUT	F3PPACs:	IN OUT		
F2 Scint:	IN OUT	F3 Scint:	IN OUT		
Rips control:	yes/no	prisca:	yes	SCA file: 00771.t	
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

print

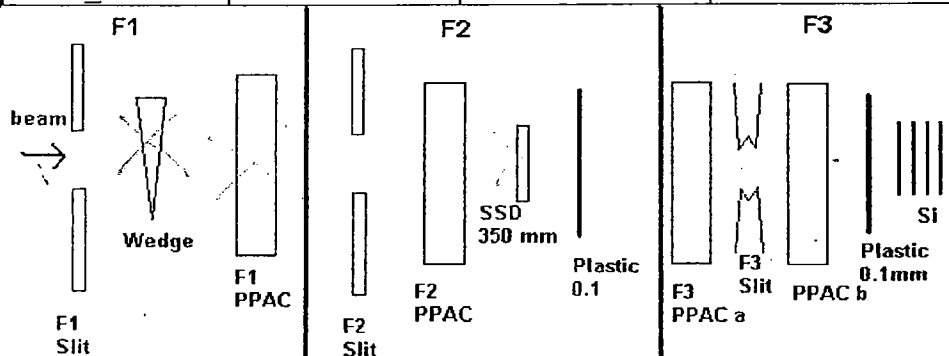
U dB-	95.3 V	I dB-	0.18 $\mu$ A
U E1-	95.2	I E1-	0.15
U E2-	95.5	I E2-	0.24
U E3-	95.3	I E3-	0.14
U E4-	95.4	I E4-	0.20
F1_PPAC=	-749	NaI(Tl) 1=	100 V
F2_PPAC=	-751	NaI(Tl) 2=	100
F3_PPACA=	-755	NaI(Tl) 3=	100
F3_PPACB=	-755	BaF=	1352.6 V





Run number:	78	Tape:	Name:
Description:	Same as 77 but different beam		
Date:	2/2/2000	Time:	
Brho1:	1790	Brho2:	1790
NMR1:	498	NMR2:	
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	5 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisca	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

Bias voltage table (please compare to previous values)			
U dE=	95.3 V	I dE=	0.19 $\mu$ A
U E1=	95.2	I E1=	0.15
U E2=	95.5	I E2=	0.24
U E3=	95.3	I E3=	0.14
U E4=	95.4	I E4=	0.10
F1_PPAC=	-748 V	NaI(Tl)_1=	100 V
F2_PPAC=	-751	NaI(Tl)_2=	100
F3_PPACA=	-755	NaI(Tl)_3=	100
F3_PPACB=	-755	BaF=	<del>1352.6</del> 1352.6



# RIPS Control Summary

2004/06/05 03:24:53

Run78

Start -- Sat Jun 5 02:56:01 2004  
Stop -- Sat Jun 5 03:22:54 2004

Parameter	Set Curr.	Read Curr.
1.3167	116.4439	116.554
1.5337	93.0273	91.959
0.7725	88.3154	88.696
0.0000	0.1469	0.000
0.2777	276.9698	278.799
0.0000	0.1469	0.026
0.5572	47.8216	47.768
0.7942	59.9494	60.098
0.6197	53.3645	53.839
0.0000	0.1469	0.000
0.2777	287.9783	286.893
0.0000	0.1469	0.000
0.6468	73.9238	74.813
1.1259	77.1951	77.356
1.0222	90.1741	90.233
1.1110	103.7327	105.227
1.4205	113.9086	112.775
1.1106	103.6952	104.782

Target		F2
Tgt 194.6	mm	FC Out
FC Out		Rgt 50.1
Up 24.0	mm	Lft 50.0
Dwn 24.0	mm	PPAC
Rgt 24.0	mm	SSD -94.8
Lft 23.8	mm	Deg Out
Lgt		Pla -4.9
		Pla IN
<hr/>		
FI		F3
Dl 119.8	mm	PPAC1 IN
ld -134.9	mm	Rgt 49.9
Rgt 5.0	mm	Lft 50.0
Lft 5.0	mm	PPAC2 IN
Mon Out		SSD Out
Deg Exp		Pla IN
PPAC Out		Lgt
Rot 0	deg	

TA-F1 1.7900 Tm  
F2-F3 1.7900 Tm

### Scaler Name : Total

UNGATED :	916083
GATED :	740089
NONE :	12132
F1PP T :	150
F2 SI :	0
CLEARs :	740053
F2PP T :	745537
F3PPA T :	682807
F1 :	578796
PL 2 :	788724
PL 3 :	833286
CLOCK :	1610521
TGT NAI :	18
TGT BAF :	47777
MOMOTA :	434818
OKUNO :	9354
FC :	3731
MOMOTA1 :	1908934
MOMOTA2 :	144518020
MOMOTA3 :	127561791
OKUNO1 :	319529
OKUNO2 :	69019
OKUNO3 :	49818
F3PPB T :	604339
LIVE TGT NAI :	12
LIVE TGT BAF :	38503
LIVE MOMOTA :	350209
LIVE OKUNO :	7504
LIVE FC :	3023
LIVE MOMOTA1 :	1545313
LIVE MOMOTA2 :	117159187
LIVE MOMOTA3 :	103453656
LIVE OKUNO1 :	257521
LIVE OKUNO2 :	55480
LIVE OKUNO3 :	40089
LIVE CLOCK :	1307013

\* Scaler file was not saved for this run!

*Attenuator*

*LINAC  
RING*

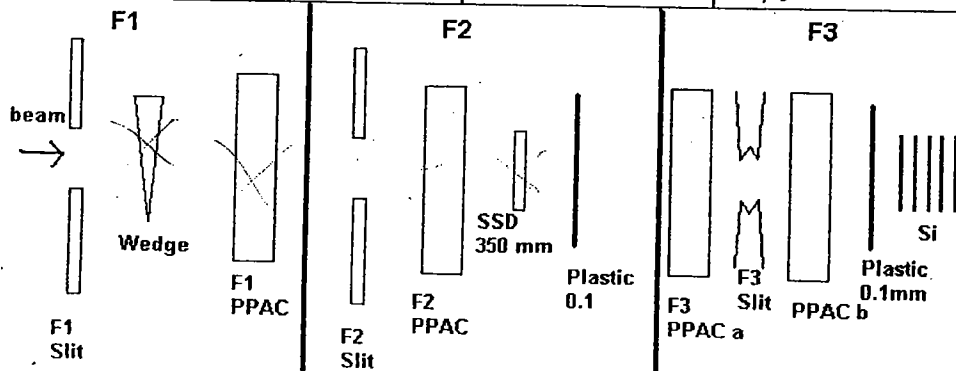
*1/60  
1/2*

*1/60*

Att LINAC 120

Run number:	79	Tape:	5	Name:	79
Description:	Same as 78 except now using Ta(166)				
Date:	6/25/94	Time:	3:36 a.m.		
Brho1:	1.7900	Brho2:	1.7900		
NMRI:	498.046	NMR2:	498.232		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	15 mm	F1PPAC:	IN OUT		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN OUT	F3PPACs:	IN OUT		
F2 Scint:	IN OUT	F3 Scint:	IN OUT		
Rips control	yes/no	prisca	SCA file F-07/94/1		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

Bias voltage table:			
U_d1=	95.3 v	I_d1=	0.19 $\mu$ A
U_E1=	95.3	I_E1=	0.16
U_E2=	95.5	I_E2=	0.24
U_E3=	95.3	I_E3=	0.14
U_E4=	95.4	I_E4=	0.20
F1_PPAC=	-747 V	NaI(Tl)_1=	100 V
F2_PPAC=	-751	NaI(Tl)_2=	100
F3_PPAC1=	-755	NaI(Tl)_3=	100
F3_PPAC2=	-755	BaF=	1352.6



RIPS Control Summary				2004/06/05 03:42:10	
Parameter	Set	Curr.	Read	Curr.	Target
Q1	1.3167	116.4439	116.442		
Q2	1.5337	93.0273	91.721		
Q3	0.7725	88.3154	88.610		
SX1	0.0000	0.1469	0.000		
D1	0.2777	276.9698	278.799		
SX2	0.0000	0.1469	0.000		
Q4	0.5572	47.8216	47.823		
Q5	0.7942	59.9494	60.098		
Q6	0.6197	53.3645	53.785		
SX3	0.0000	0.1469	0.021		
D2	0.2777	287.9783	286.628		
SX4	0.0000	0.1469	0.000		
Q7	0.6468	73.9238	74.651		
Q8	1.1259	77.1951	77.435		
Q9	1.0222	90.1741	90.045		
Q10	1.1110	103.7327	105.004		
Q11	1.4205	113.9086	112.639		
Q12	1.1106	103.6952	104.559		
Focus		Brho	TA-F1	1.7900	Tm
TA-F2	1.7900	Tm	F2-F3	1.7900	Tm

Target		F2	
Tgt	95.8 mm	FC	Out
FC	Out	Rgt	50.1 mm
Up	24.0 mm	Lft	50.0 mm
Dwn	24.0 mm	PPAC	
Rgt	24.0 mm	SSD	-94.8 mm
Lft	23.8 mm	Out	
Lgt		Deg	-4.9 deg.
		Pla	IN

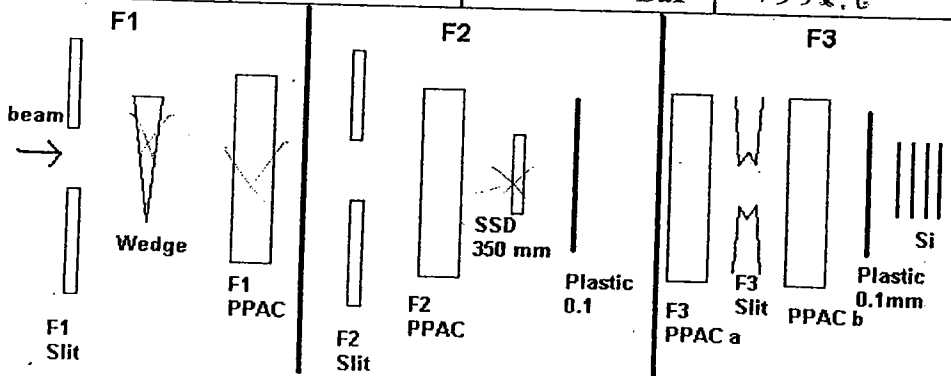
  

F1		F3	
D1	119.8 mm	PPAC1	IN
ld	-134.9 mm	Rgt	49.9 mm
Rgt	5.0 mm	Lft	50.0 mm
Lft	5.0 mm	PPAC2	IN
Mon	Out	SSD	Out
Deg	Exp	Pla	IN
PPAC	Out	Lgt	
Rot	0 deg.		

6:05.04:3:38		prisca	
Run79			
Start	-- Sat Jun 5	03:28:41	2004
Stop	-- Sat Jun 5	03:38:25	2004
Scaler Name : Total			
UNGATED :		299330	
GATED :		239618	
NONE :		3928	
F1PP T :		29	
F2 SI :		0	
CLEARs :		239609	
F2PP T :		225968	
F3PPA T :		223021	
E1 :		213201	
PL 2 :		249329	
PL 3 :		263312	
CLOCK :		489850	
TGT NAI :		4	
TGT BAF :		5330	
MOMOTA :		107029	
OKUNO :		9173	
FC :		1176	
MOMOTA1 :		528226	
MOMOTA2 :		43415061	
MOMOTA3 :		38243627	
OKUNO1 :		158729	
OKUNO2 :		38462	
OKUNO3 :		19790	
F3PPB T :		201988	
LIVE TGT NAI :		3	
LIVE TGT BAF :		4265	
LIVE MOMOTA :		85423	
LIVE OKUNO :		7337	
LIVE FC :		956	
LIVE MOMOTA1 :		422255	
LIVE MOMOTA2 :		34674488	
LIVE MOMOTA3 :		30560793	
LIVE OKUNO1 :		126580	
LIVE OKUNO2 :		30574	
LIVE OKUNO3 :		15814	
LIVE_CLOCK :		391737	

Run number	80	Tape	Name
Description	Lost beam during 79. Same as 79.		
Date	6/25/04	Time	4:02 am
Brho1	1.7900	Brho2	1.7900
NMR1	498.096	NMR2	498.232
Target	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit	± 5 mm	F1PPAC	IN OUT
Wedge	none	100mg/Al	60mg/Al
F2 slit	open		
F2PPAC	IN OUT	F3PPACs	IN OUT
F2 Scint	IN OUT	F3 Scint	IN OUT
Rips control	yes/no	prisca	SCA file
Trigger	F1 PPAC/F1Plastic/F2 Plastic		

U_dE	95.3 V	I_dE	0.19 A
U_F1	95.2	I_F1	0.16
U_F2	95.5	I_F2	0.24
U_F3	95.3	I_F3	0.14
U_F4	95.4	I_F4	0.22
F1_PPAC	-748 V	NaI(Tl)_1	100 V
F2_PPAC	-751	NaI(Tl)_2	100
F3_PPAC1	-755	NaI(Tl)_3	100
F3_PPAC2	-755	BaF	1352.6



RIPS Control Summary				2004/06/05 04:07:29	
Parameter	Set Curr.	Read Curr.	Target	F2	
Q1	1.3167	116.4439	116.554	Tgt 95.8	mm
Q2	1.5337	93.0273	91.840	FC Out	Rgt 50.1 mm
Q3	0.7725	88.3154	110.697	Up 24.0	mm
SX1	0.0000	0.1469	0.000	Dwn 24.0	mm
D1	0.2777	276.9698	278.799	Rgt 24.0	mm
SX2	0.0000	0.1469	0.000	Lft 23.8	mm
Q4	0.5572	47.8216	47.823	Lgt	Pls IN
Q5	0.7942	59.9494	60.036		
Q6	0.6197	53.3645	53.568		
SX3	0.0000	0.1469	0.000		
D2	0.2777	287.9783	287.157		
SX4	0.0000	0.1469	0.000		
Q7	0.6468	73.9238	74.813		
Q8	1.1259	77.1951	77.356		
Q9	1.0222	90.1741	90.327		
Q10	1.1110	103.7327	105.227		
Q11	1.4205	113.9086	112.911		
Q12	1.1106	103.6952	104.782		
FOCUS			Brho TA-F1 1.7900 Tm	F3	
1.7900 Tm			F2-F3 1.7900 Tm	D1 119.8	mm
			Id -134.9	mm	PPAC1 IN
			Rgt 5.0	mm	Rgt 49.9 mm
			Lft 5.0	mm	Lft 50.0 mm
			Mom Out		PPAC2 IN
			Deg Exp		SSD Out
			PPAC Out		Pls IN
			Rot 0	deg.	Lgt

D1 498,096 D2 498,232.

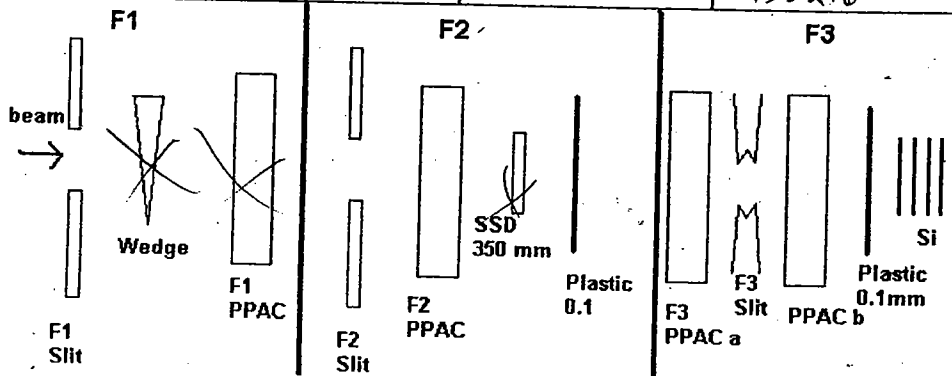
04:05:04 4:05 prisca

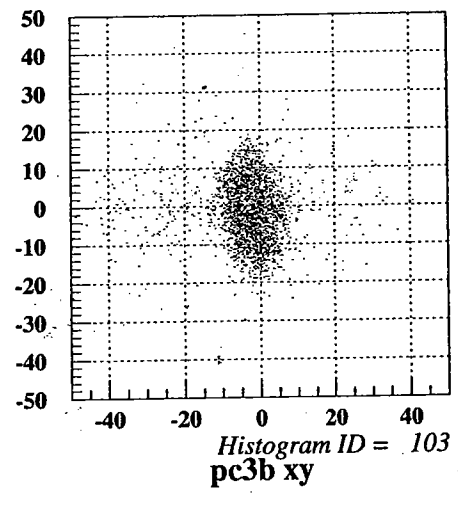
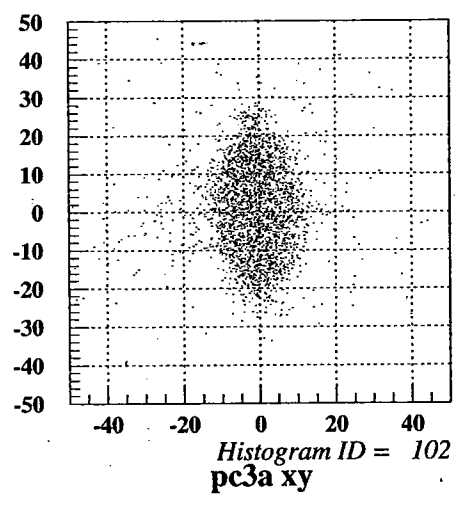
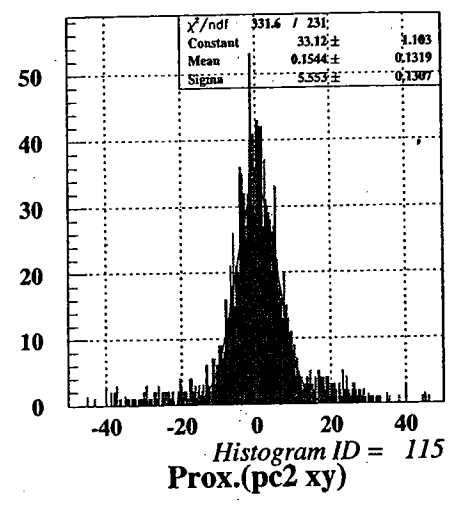
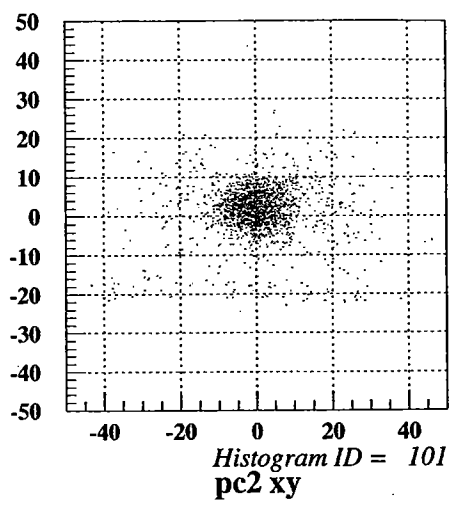
Run80  
 Start -- Sat Jun 5 03:50:51 2004  
 Stop -- Sat Jun 5 04:05:06 2004

Scaler Name :	Total
UNGATED :	574108
GATED :	442272
NONE :	7250
FIPP T :	55
F2 SI :	0
CLEARs :	442251
F2PP T :	429841
F3PPA T :	427127
E1 :	411870
PL 2 :	477685
PL 3 :	506621
CLOCK :	783854
TGT NAI :	4
TGT BAF :	10014
MOMOTA :	206774
OKUNO :	18012
FC :	1870
MOMOTA1 :	891586
MOMOTA2 :	69649294
MOMOTA3 :	61465098
OKUNO1 :	307688
OKUNO2 :	74880
OKUNO3 :	38162
F3PPB T :	387319
LIVE TGT NAI :	3
LIVE TGT BAF :	7708
LIVE MOMOTA :	158279
LIVE OKUNO :	13787
LIVE FC :	1437
LIVE MOMOTA1 :	684244
LIVE MOMOTA2 :	53470666
LIVE MOMOTA3 :	47218585
LIVE OKUNO1 :	236152
LIVE OKUNO2 :	57591
LIVE OKUNO3 :	29288
LIVE_CLOCK :	603170

Run number:	81	Date:	Name:
Description:	New Brho setting. Ta(166) target		
Date:	6/05/04	Time:	4:53 a.m.
Brho1:	1.810	Brho2:	1.810
NMR1:	503.655	NMR2:	503.997
Target:	Be(92)	(Ta(166))	Be(115) Be(181)
F1 slit:	± 5 mm	F1PPAC:	IN <u>OUT</u>
Wedge:	<u>none</u>	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	<u>IN</u> OUT	F3PPACs:	<u>IN</u> OUT
F2 Scint:	<u>IN</u> OUT	F3 Scint:	<u>IN</u> OUT
Rips control	<u>yes/no</u>	TRISA	SCA11E
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

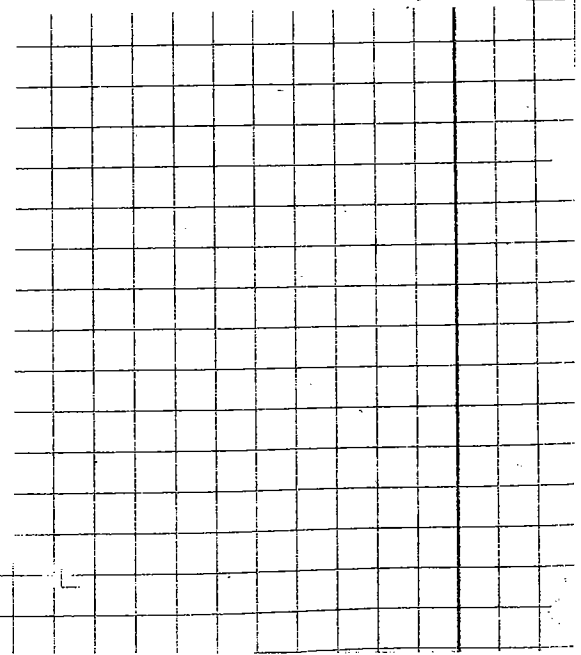
U101	95.3 V	U102	0.19 mA
U103	95.2	U104	0.16
U105	95.5	U106	0.24
U107	95.3	U108	0.14
U109	95.4	U110	0.20
F1_PPAC=	-748	NaI(Tl)_1=	100 V
F2_PPAC=	-751	NaI(Tl)_2=	100
F3_PPAC1=	-755	NaI(Tl)_3=	100.
F3_PPAC2=	-755	BaF=	1352.6





```

F3PPA T : 676964
  E1 : 657840
  PL 2 : 749729
  PL 3 : 788442
  CLOCK : 1404853
  TGT NAI : 4
  TGT BAF : 14417
  MOMOTA : 295300
  OKUNO : 25655
  FC : 3450
  MOMOTA1 : 1496147
  MOMOTA2 : 124082328
  MOMOTA3 : 109316729
  OKUNO1 : 436796
  OKUNO2 : 106043
  OKUNO3 : 54182
  F3PPB T : 618823
  LIVE TGT NAI : 2
  LIVE TGT BAF : 11482
  LIVE MOMOTA : 234740
  LIVE OKUNO : 20372
  LIVE FC : 2761
  LIVE MOMOTA1 : 1190844
  LIVE MOMOTA2 : 98777731
  LIVE MOMOTA3 : 87079097
  LIVE OKUNO1 : 346971
  LIVE OKUNO2 : 84288
  LIVE OKUNO3 : 43118
  LIVE_CLOCK : 1119815
  
```





PLPS Control Summary

2004/06/05 04:54:44

1.3167	117.7562	117.779		
1.5337	94.0689	92.908	95.8	50.1
0.7725	89.3036	89.476		50.0
0.0000	0.1469	0.000	24.0	
0.2777	280.071	281.973	24.0	
0.0000	0.1469	0.000	24.0	-94.8
0.5572	48.3737	48.313		
0.7942	60.6366	60.717	23.8	-4.9
0.6197	53.9786	54.275		
0.0000	0.1469	0.000		
0.2777	291.1989	290.330		
0.0000	0.1469	0.000	119.8	
0.6468	74.7512	75.545	-134.9	49.9
1.1259	78.0552	78.147	5.0	50.0
1.0222	91.1929	91.173	5.0	
1.1110	104.893	106.562		
1.4205	115.178	114.134		
1.1106	104.855	105.894		
1.8100	1.8100	0		
1.8100	1.8100			

DL = 563.655

(MT) D2 = 563.997

(MT)

01/05/04 5:06

prisca

Run81

Start -- Sat Jun 5 04:42:42 2004  
 Stop -- Sat Jun 5 05:06:08 2004

Scaler Name : Total

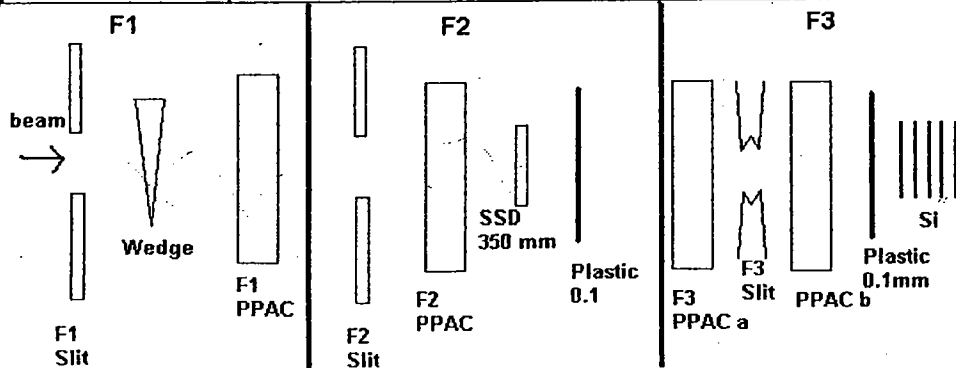
```

    UNGATED : 872298
    GATED : 695308
    NONE : 11398
    F1PP T : 105
    F2 SI : 0
    CLEARS : 695279
    F2PP T : 685158
    F3PPA T : 676964
    E1 : 657840
    PL 2 : 749729
    PL 3 : 788442
    CLOCK : 1404853
    TGT NAI : 4
    TGT BAF : 14417
    MOMOTA : 295300
    OKUNO : 25655
    FC : 3450
    MOMOTA1 : 1496147
    MOMOTA2 : 124082328
    MOMOTA3 : 109316729
    OKUNO1 : 436796
    OKUNO2 : 106043
    OKUNO3 : 54182
    E3PPB T : 618823
    LIVE TGT NAI : 2
    LIVE TGT BAF : 11482
    LIVE MOMOTA : 234740
    LIVE OKUNO : 20372
    LIVE FC : 2761
    LIVE MOMOTA1 : 1190844
    LIVE MOMOTA2 : 98777731
    LIVE MOMOTA3 : 87079097
    LIVE OKUNO1 : 346971
    LIVE OKUNO2 : 84288
    LIVE OKUNO3 : 43118
    LIVE CLOCK : 1119815
    
```

Att. 1/90

Run number:	82	Tape:	Name:
Description:	Same as 81. New target Be(92).		
Date:	6/5/74	Time:	5:17 a.m.
Brho1:	1.8100	Brho2:	1.8100
NMR1:	503.654	NMR2:	503.805
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	± 5 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control:	yes/no	prisca	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

U dE=	95.4 V	I dI=	0.21 $\mu$ A
U E1=	95.3	I E1=	0.17
U E2=	95.5	I E2=	0.24
U E3=	95.3	I E3=	0.14
U E4=	95.4	I E4=	0.20
F1_PPAC=	- 748	NaI(Tl)_1=	100 V
F2_PPAC=	- 751	NaI(Tl)_2=	100
F3_PPAC1=	- 755	NaI(Tl)_3=	100
F3_PPAC2=	- 755	BaF=	1352.6



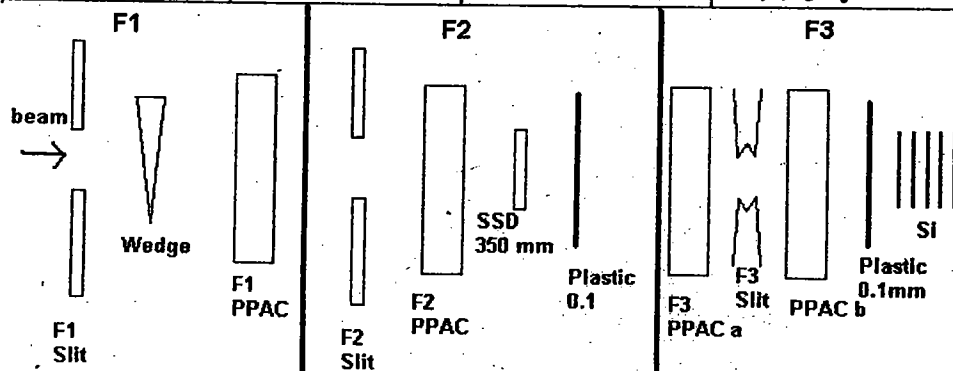
Att 60

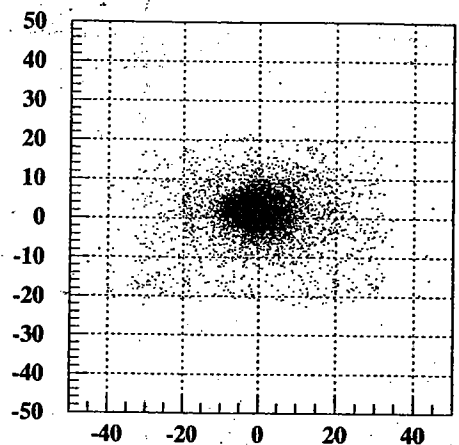
RIPS Control Summary				2004/06/05 05:27:46							
Parameter	Set Curr.	Read Curr.	Target	F2							
Q1	1.3167	117.7562	117.668	Tgt 194.6	mm	FC	Out				
Q2	1.5337	94.0689	92.908	FC	Out	Rgt	50.1 mm				
Q3	0.7725	89.3036	89.476	Up	24.0 mm	Lft	50.0 mm				
SX1	0.0000	0.1469	0.000	Dwn	24.0 mm	PPAC					
D1	0.2777	280.0715	281.973	Rgt	24.0 mm	SSD	-94.8 mm				
SX2	0.0000	0.1469	0.026	Lft	23.8 mm	Deg	Out				
Q4	0.5572	48.3737	48.313	Lgt		Pla	-4.9 deg				
Q5	0.7942	60.6366	60.717								
Q6	0.6197	53.9786	54.220								
SX3	0.0000	0.1469	0.021	F1				F3			
D2	0.2777	291.1989	290.330	D1	119.8 mm	PPAC1	IN				
SX4	0.0000	0.1469	0.000	Id	-134.9 mm	Rgt	49.9 mm				
Q7	0.6468	74.7512	75.789	Rgt	5.0 mm	Lft	50.0 mm				
Q8	1.1259	78.0552	78.147	Lft	5.0 mm	PPAC2	IN				
Q9	1.0222	91.1929	91.267	Mom	Out	SSD	Out				
Q10	1.1110	104.8931	106.228	Deg	Exp	Pla	IN				
Q11	1.4205	115.1781	114.269	PPAC	Out	Lgt					
Q12	1.1106	104.8552	105.894	Rot	0 deg						
Focus	Erho	TA-F1	1.8100 Im								
F2	1.8100 Im	F2-F3	1.8100 Im								

6:05:04.543		prisca	
Run82			
Start	--	Sat Jun 5	05:17:09 2004
Stop	--	Sat Jun 5	05:43:32 2004
Scaler Name : Total			
UNGATED :		1207740	
GATED :		916442	
NONE :		15022	
F1PP T :		163	
F2 SI :		0	
CLEARs :		916343	
F2PP T :		1050942	
F3PPA T :		969987	
E1 :		857800	
PL 2 :		1100296	
PL 3 :		1127108	
CLOCK :		1581029	
TGT NAI :		11	
TGT BAF :		56853	
MOMOTA :		525692	
OKUNO :		11206	
FC :		3643	
MOMOTA1 :		2010830	
MOMOTA2 :		142192342	
MOMOTA3 :		125511871	
OKUNO1 :		388469	
OKUNO2 :		83770	
OKUNO3 :		59501	
F3PPB T :		876601	
LIVE TGT NAI :		11	
LIVE TGT BAF :		43065	
LIVE MOMOTA :		397306	
LIVE OKUNO :		8481	
LIVE FC :		2777	
LIVE MOMOTA1 :		1526497	
LIVE MOMOTA2 :		108225787	
LIVE MOMOTA3 :		95575974	
LIVE OKUNO1 :		293453	
LIVE OKUNO2 :		63275	
LIVE OKUNO3 :		44979	
LIVE_CLOCK :		1205470	

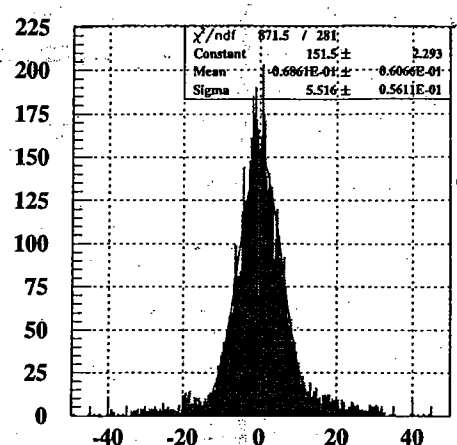
Runnumber:	83	Time:	Name:
Description:	New Brho setting. Be(92) target		
Date:	6/05/04	Time:	5:51 a.m.
Beam:	1.8300	Beam:	1.8300
NMR1:	509.209	NMR2:	509.521
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	± 5 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control:	yes/no		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

U <sub>DE</sub> =	95.4 V	I <sub>DE</sub> =	0.21 $\mu$ A
U <sub>DF</sub> =	95.3	I <sub>DF</sub> =	0.18
U <sub>DZ</sub> =	95.5	I <sub>DZ</sub> =	0.24
U <sub>DF</sub> =	95.3	I <sub>DF</sub> =	0.14
U <sub>DE</sub> =	95.4	I <sub>DE</sub> =	0.20
F1_PPAC=	-748	NaI(Tl)_1=	100 V
F2_PPAC=	-751	NaI(Tl)_2=	100
F3_PPAC1=	-755	NaI(Tl)_3=	100
F3_PPAC2=	-755	BaF=	1352.6

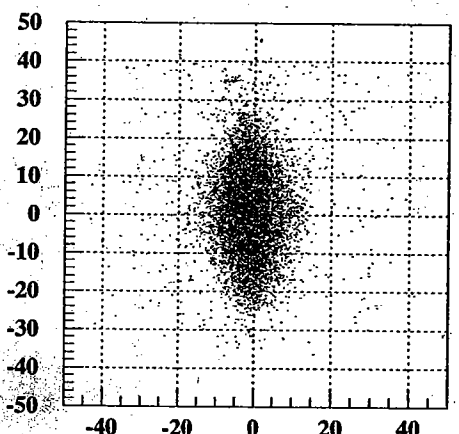




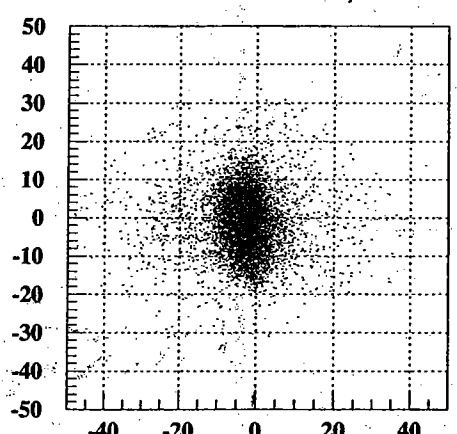
Histogram ID = 101  
pc2 xy



Histogram ID = 113  
Prox.(pc2 xy)



Histogram ID = 102  
pc3a xy



Histogram ID = 103  
pc3b xy

UNGATED :	1298011
GATED :	952183
NONE :	15608
F1PP_T :	155
F2_SI :	0
CLEARs :	952089
F2PP_T :	1216202
F3PPA_T :	1105764
E1 :	995111
PL_2 :	1223275
PL_3 :	1226840
CLOCK :	1468984
TGT_NAI :	5
TGT_BAF :	50320
MOMOTA :	467961
OKUNO :	9907
FC :	3415
MOMOTA1 :	1849768
MOMOTA2 :	132097993
MOMOTA3 :	116570281
OKUNO1 :	344582
OKUNO2 :	74267
OKUNO3 :	53192
F3PPB_T :	1023202
LIVE_TGT_NAI :	4
LIVE_TGT_BAF :	36800
LIVE_MOMOTA :	342112
LIVE_OKUNO :	7171
LIVE_FC :	2504
LIVE_MOMOTA1 :	1354109
LIVE_MOMOTA2 :	96825217
LIVE_MOMOTA3 :	85498441
LIVE_OKUNO1 :	251297
LIVE_OKUNO2 :	54148
LIVE_OKUNO3 :	38746
LIVE_CLOCK :	1079469

RIPS Control Summary

2004/06/05 05:01:57

133167	119.068	119.117		
133307	95.1104	93.620	194.6	50.1
037725	90.2918	90.082		50.0
030000	0.1469	0.000	24.0	
032777	283.173	284.883	24.0	
030000	0.1469	0.000	24.0	-94.8
035572	48.9259	48.913	23.8	-4.9
037942	61.3238	61.521		
036197	54.5926	54.710		
030000	0.1469	0.000		
037777	294.3908	293.768		
030000	0.1469	0.000	119.8	
036468	75.5786	76.683	-134.9	49.9
134259	78.9153	78.175	5.0	50.0
130222	92.2117	92.207	5.0	
134110	106.0538	107.563		
134205	116.4478	114.541		
134106	106.0153	107.229		
		1.8300	0	
1.8300		1.8300		

509.209 (mt) D2 = 509.521 (Cmt)

05:04:16 prisca

Start -- Sat Jun 5 05:51:37 2004  
 Stop -- Sat Jun 5 06:16:08 2004

Scaler Name : Total

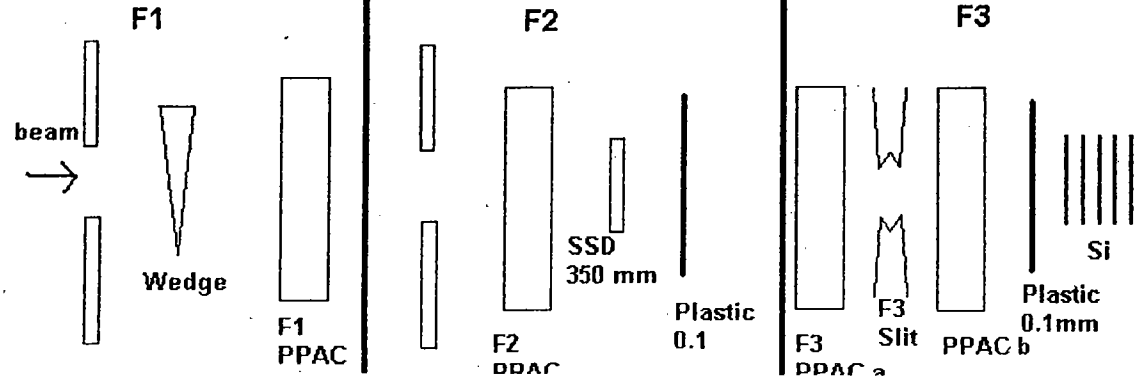
UNGATED : 1298011  
 GATED : 952183  
 NONE : 15608  
 FLPP T : 155  
 F2 SI : 0  
 CLEARS : 952089  
 F2PP T : 1216202  
 F3PPA T : 1105764  
 E1 : 995111  
 PL 2 : 1223275  
 PL 3 : 1226840  
 CLOCK : 1468984  
 TGT NAI : 5  
 TGT BAF : 50320  
 MOMOTA : 467961  
 OKUNO : 9907  
 FC : 3415  
 MOMOTA1 : 1849768  
 MOMOTA2 : 132097993  
 MOMOTA3 : 116570281  
 OKUNO1 : 344582  
 OKUNO2 : 74267  
 OKUNO3 : 53192  
 F3PPB T : 1023202  
 LIVE TGT NAI : 4  
 LIVE TGT BAF : 36800  
 LIVE MOMOTA : 342112  
 LIVE OKUNO : 7171  
 LIVE FC : 2504  
 LIVE MOMOTA1 : 1354109  
 LIVE MOMOTA2 : 96825217  
 LIVE MOMOTA3 : 85498441  
 LIVE OKUNO1 : 251297  
 LIVE OKUNO2 : 54148

Att. 1/120

Run number:	84	Tape:	5	Name:	NR
Description:	Same as 83. New target.				
Date:	6/25/04	Time:	6:23 a.m.		
Brho1:	1.8300	Brho2:	1.8300		
NMR1:	509.205	NMR2:	509.362		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	± 5 mm	F1PPAC:	IN OUT		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN OUT	F3PPACs:	IN OUT		
F2 Scint:	IN OUT	F3 Scint:	IN OUT		
Rips control	yes/no	prisca gas	SCA file 10081117		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

**Bias voltage table:**

U dE=	95.4 V	I dE=	0.21 $\mu$ A
U E1=	95.4	I E1=	0.20
U E2=	95.5	I E2=	0.24
U E3=	95.3	I E3=	0.14
U E4=	95.4	I E4=	0.20
F1_PPAC=	-748 V	NaI(Tl)_1=	600 V
F2_PPAC=	-751	NaI(Tl)_2=	600
F3_PPAC1=	-755	NaI(Tl)_3=	600
F3_PPAC2=	-755	BaF=	1352.6



2004/06/05 06:32:02

## RIPS Control Summary

Parameter	Set	Curr.	Read	Curr.	Target	F2
Q1	1.3167	119.0685	119.117		Tgt 95.9 mm	FC Out
Q2	1.5337	95.1104	93.739		FC Out	Rgt 50.1 mm
Q3	0.7725	90.2918	90.515		Up 24.0 mm	Lft 50.0 mm
SX1	0.0000	0.1469	0.000		Dwn 24.0 mm	PPAG
D1	0.2777	283.1733	285.147		Rgt 24.0 mm	SSD -94.8 mm
SX2	0.0000	0.1469	0.000		Lft 23.8 mm	Out
Q4	0.5572	48.9259	48.859		Lgt	Deg -4.9 deg.
Q5	0.7942	61.3238	61.398			Pla IN
Q6	0.6197	54.5926	54.927			
SX3	0.0000	0.1469	0.021			
D2	0.2777	294.3908	293.503		F1	F3
SX4	0.0000	0.1469	0.000		D1 119.8 mm	PPAC1 IN
Q7	0.6468	75.5786	76.440		ld -134.9 mm	Rgt 49.9 mm
Q8	1.1259	78.9153	79.017		Rgt 5.0 mm	Lft 50.0 mm
Q9	1.0222	92.2117	92.301		Lft 5.0 mm	PPAC2 IN
Q10	1.1110	106.0536	107.340		Mon Out	SSD Out
Q11	1.4205	116.4476	114.813		Deg Exp	Pla IN
Q12	1.1106	106.0153	107.118		PPAC Out	Lgt
Focus		Brho	TA-F1 1.8300	Tm	Rot. 0	deg.
F1-F2	1.8300	Tm	F2-F3 1.8300	Tm		

exit

6\*1 05, 04 6:46 prisca

Run84

Start -- Sat Jun 5 06:23:07 2004  
 Stop -- Sat Jun 5 06:46:36 2004

Scaler Name : Total

```

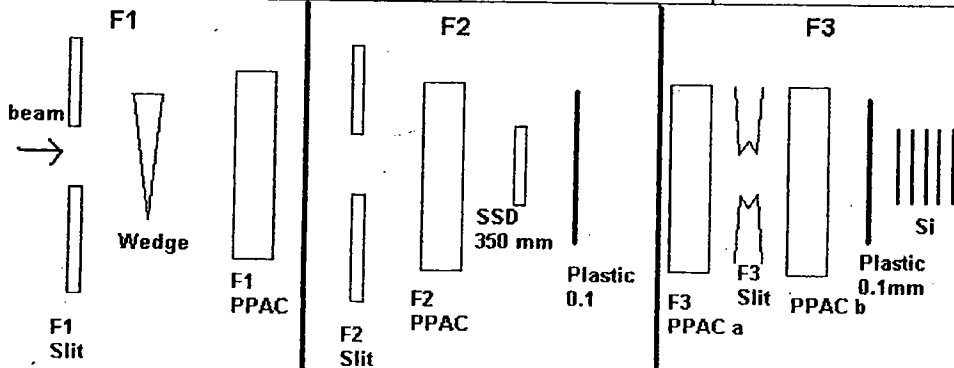
    UNGATED : 1144457
      GATED : 857745
    NONE : 14060
    F1PP T : 101
    F2 SI : 0
    CLEARS : 857661
    F2PP T : 921878
    F3PPA T : 906824
      E1 : 885035
      PL_2 : 995068
      PL_3 : 1032237
    CLOCK : 1407017
    TGT NAI : 8110881
    TGT BAF : 17067
    MOMOTA : 345050
      OKUNO : 30263
      FC : 3435
    MOMOTA1 : 1511844
    MOMOTA2 : 124768110
    MOMOTA3 : 110080283
      OKUNO1 : 516197
      OKUNO2 : 125559
      OKUNO3 : 64262
    F3PPB T : 835329
    LIVE TGT NAI : 6050438
    LIVE TGT BAF : 12793
    LIVE MOMOTA : 257658
      LIVE OKUNO : 22683
      LIVE FC : 2562
    LIVE MOMOTA1 : 1131835
    LIVE MOMOTA2 : 93450540
    LIVE MOMOTA3 : 82504523
    LIVE OKUNO1 : 385586
    LIVE OKUNO2 : 93816
    LIVE OKUNO3 : 47968
    LIVE_CLOCK : 1055614
  
```



Att 1/120

Run number:	85	Tape:	6	Name:	
Description:	New Bebn settings. Ta(166) target. <i>Beam was down for ~30 min before run</i>				
Date:	6/25/04	Time:	7:32 a.m.		
Brho1:	1.8500	Brho2:	1.8500		
NMR1:	514.742	NMR2:	515.119		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	$\pm 5$ mm	F1PPAC:	IN <u>OUT</u>		
Wedge:	<u>none</u>	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	<u>IN</u> OUT	F3PPACs:	<u>IN</u> OUT		
F2 Scint:	<u>IN</u> OUT	F3 Scint:	<u>IN</u> OUT		
Rips control	<u>yes/no</u>	prisca	SCA file		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

Bias voltage table:			
U dE=	95.4	I dE=	0.21
U E1=	95.4	I E1=	0.20
U E2=	95.5	I E2=	0.24
U E3=	95.3	I E3=	0.14
U E4=	95.4	I E4=	0.20
F1_PPAC=	-748 V	NaI(Tl)_1=	610 ✓
F2_PPAC=	-751 V	NaI(Tl)_2=	610
F3_PPAC1=	-755 V	NaI(Tl)_3=	610
F3_PPAC2=	-755 V	BaF=	1352.6



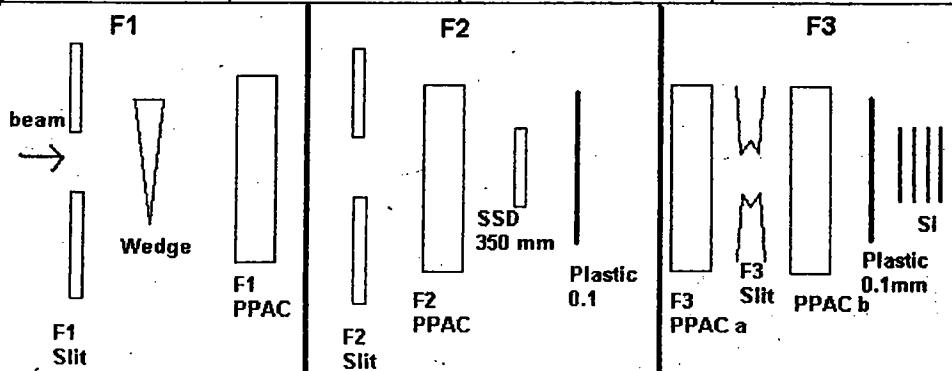
RIPS Control Summary				2004/06/05 07:46:51			
Parameter	Set Curr.	Read Curr.	Target	F2			
Q1	1.3167	120.3809	120.565	Tgt 95.9	mm	FC Out	
Q2	1.5337	96.1520	94.806	FC Out		Rgt 50.1 mm	
Q3	0.7725	91.2800	91.382	Up 24.0	mm	Lft 50.0 mm	
SX1	0.0000	0.1469	0.000	Dwn 24.0	mm	PPAC	
D1	0.2777	286.2751	288.322	Rgt 24.0	mm	SSD -94.8 mm	
SX2	0.0000	0.1469	0.000	Lft 23.8	mm	Deg Out -4.9 deg.	
Q4	0.5572	49.4780	49.568	Lgt		Pla IN	
Q5	0.7942	62.0110	62.140	F1			
Q6	0.6197	55.2067	55.525	D1 119.8	mm	PPAC1 IN	
SX3	0.0000	0.1469	0.021	ld -134.9	mm	Rgt 49.9 mm	
D2	0.2777	297.7555	296.676	Rgt 5.0	mm	Lft 50.0 mm	
SX4	0.0000	0.1469	0.000	Lft 5.0	mm	PPAC2 IN	
Q7	0.6468	76.4060	77.497	Mom Out		SSD Out	
Q8	1.1259	79.7753	79.887	Deg Exp		Pla IN	
Q9	1.0222	93.2305	93.335	PPAC Out		Lgt	
Q10	1.1110	107.2141	108.341	Rot 0	deg.		
Q11	1.4205	117.7173	116.579	F3			
Q12	1.1106	107.1753	108.453	PPAC1 IN			
Focus	Brho	TA-F1 1.8500	Tm	PPAC2 IN			
F1-F2 1.8500	Tm	F2-F3 1.8500	Tm	SSD Out			
				Pla IN			
				Lgt			
				exit			

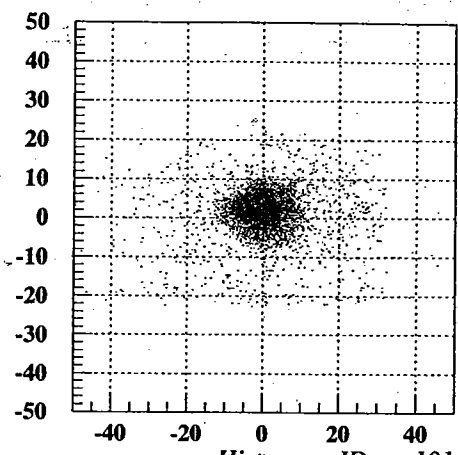
6:05.047:41		prisca	
Run85			
Start	-- Sat Jun 5	07:32:13	2004
Stop	-- Sat Jun 5	07:40:53	2004
Scaler Name :	Total		
UNGATED :	485112		
GATED :	342974		
NONE :	5622		
F1PP T :	56		
F2 SI :	1		
CLEAR S :	342943		
F2PP T :	420937		
F3PPA T :	411383		
E1 :	401986		
PL 2 :	447927		
PL 3 :	465256		
CLOCK :	519892		
TGT NAI :	3695331		
TGT BAF :	6608		
MOMOTA :	136313		
OKUNO :	12303		
FC :	1254		
MOMOTA1 :	579568		
MOMOTA2 :	46476561		
MOMOTA3 :	41004591		
OKUNO1 :	205709		
OKUNO2 :	49925		
OKUNO3 :	25910		
F3PPE T :	381829		
LIVE TGT NAI :	2600786		
LIVE TGT BAF :	4613		
LIVE MOMOTA :	96306		
LIVE OKUNO :	8679		
LIVE FC :	877		
LIVE MOMOTA1 :	408469		
LIVE MOMOTA2 :	32694226		
LIVE MOMOTA3 :	28868781		
LIVE OKUNO1 :	144778		
LIVE OKUNO2 :	35312		
LIVE OKUNO3 :	18150		
LIVE_CLOCK :	366056		

\* Run stopped prematurely due to the fact that the position was not checked at F2 after changing Brho.

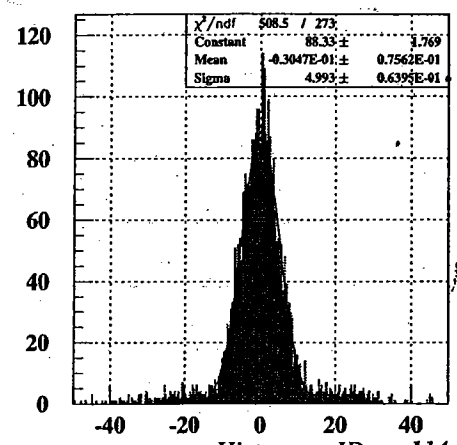
Run number:	86	Target:	Name:
Description:	Position was checked. Cont. run 85		
Date:	6/05/04	Time:	7:46 a.m.
Bfoil:	1.8500	Bfoil:	1.8500
NMRI:	514.742	NMRI:	<del>514.990</del> 514.990
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	± 5 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	PPACs	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

U <sub>01</sub>	95.4V	I <sub>01</sub>	0.21 $\mu$ A
U <sub>02</sub>	95.4V	I <sub>02</sub>	0.20
U <sub>03</sub>	95.5V	I <sub>03</sub>	0.29
U <sub>04</sub>	95.3V	I <sub>04</sub>	0.14
U <sub>05</sub>	95.4V	I <sub>05</sub>	0.20
F1_PPAC	- 748 V	NaI(Tl)_1	610 ✓
F2_PPAC	- 751	NaI(Tl)_2	610
F3_PPAC1	- 755	NaI(Tl)_3	610
F3_PPAC2	- 755	BaF	1352.6

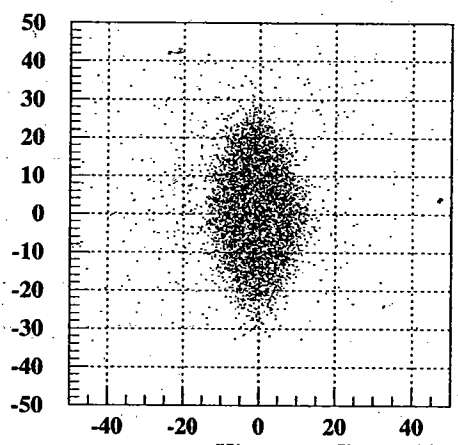




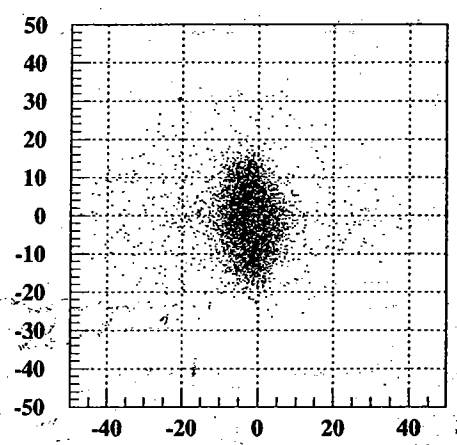
Histogram ID = 101  
pc2 xy



Histogram ID = 114  
Prox.(pc2 xy)



Histogram ID = 102  
pc3a xy



Histogram ID = 103  
pc3b xy

CLEAR5	1021019
F2PP T	1181389
F3PPA T	1156297
E1	1132394
PL 2	1258456
PL 3	1296042
CLOCK	1527031
TGT NAI	10449815
TGT BAF	18471
MOMOTA	392482
OKUNO	33869
FC	3684
MOMOTA1	1660708
MOMOTA2	135930780
MOMOTA3	119840759
OKUNO1	578386
OKUNO2	139981
OKUNO3	71794
F3PPB T	1074042
LIVE TGT NAI	7546085
LIVE TGT BAF	13341
LIVE MOMOTA	276641
LIVE OKUNO	24493
LIVE FC	2684
LIVE MOMOTA1	1203139
LIVE MOMOTA2	98503847
LIVE MOMOTA3	86911446
LIVE OKUNO1	417458
LIVE OKUNO2	101151
LIVE OKUNO3	51747
LIVE CLOCK	1108117

EIPS Control Summary

2004/06/05 08:00:52

1:3157	120.3809	120.342	95.9	50.1
1:5937	96.1520	94.688	24.0	50.0
0:7725	91.2800	91.468	24.0	-94.8
0:0000	0.1469	0.000	24.0	-4.9
0:2777	286.2751	288.322	119.8	49.9
0:0000	0.1469	0.000	-134.9	50.0
0:5572	49.4780	49.404	5.0	5.0
0:7942	62.0110	62.140	5.0	
0:6197	55.2067	55.471		
0:0000	0.1469	0.000		
0:2777	297.6403	296.941		
0:0000	0.1469	0.000		
0:6468	76.4060	77.009		
1:1259	79.7753	80.046		
1:0222	93.2305	93.335		
1:1110	107.2141	108.453		
1:4205	117.7172	116.308		
1:1106	107.1753	108.564		
1.8500		0		
1.8500	1.8500			

D1 = 514.742

D2 = 514.990

6/05/04 0:12

prisca

Run86

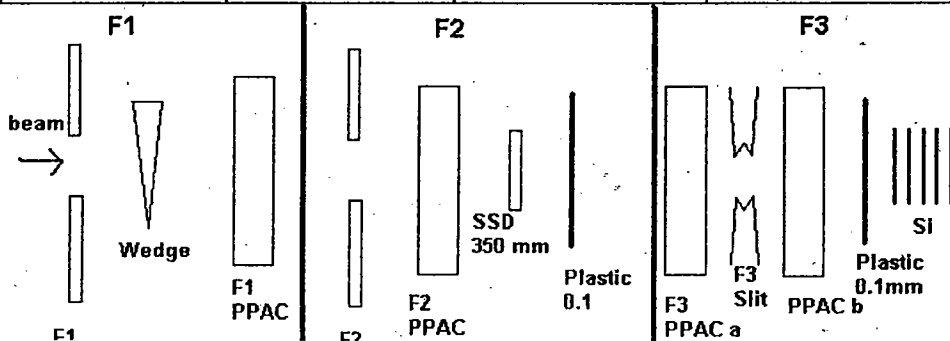
Start -- Sat Jun 5 07:46:16 2004  
 Stop -- Sat Jun 5 08:11:45 2004

Scaler Name : Total

UNGATED : 1407901  
 GATED : 1021127  
 NONE : 16738  
 F1PP T : 101  
 F2 SI : 0  
 CLEARS : 1021019  
 F2PP T : 1181389  
 F3PPA T : 1156297  
 E1 : 1132394  
 PL 2 : 1258456  
 PL 3 : 1296042  
 CLOCK : 1527031  
 TGT NAI : 10449815  
 TGT BAF : 18471  
 MOMOTA : 382482  
 OKUNO : 33869  
 FC : 3684  
 MOMOTA1 : 1660708  
 MOMOTA2 : 135930780  
 MOMOTA3 : 119840759  
 OKUNO1 : 578386  
 OKUNO2 : 139981  
 OKUNO3 : 71794  
 F3PPB T : 1074042  
 LIVE TGT NAI : 7546085  
 LIVE TGT BAF : 13341  
 LIVE MOMOTA : 276641  
 LIVE OKUNO : 24493  
 LIVE FC : 2684  
 LIVE MOMOTA1 : 1203139  
 LIVE MOMOTA2 : 98503847  
 LIVE MOMOTA3 : 86911446  
 LIVE OKUNO1 : 417458  
 LIVE OKUNO2 : 101151  
 LIVE OKUNO3 : 51747  
 LIVE\_CLOCK : 1108117

Run number:	87	Date:	June 08 20
Description:	Switched to Be 72, sources 86 otherwise		
Date:	6/05/07	Time:	08 20
Beam:	1.8500	Beam:	1.8500
NMPT:	514.743	NMPT:	514.965
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	± 5 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control:	yes/no		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

U <sub>BE</sub>	95.5	U <sub>NaI</sub>	0.23 $\mu$ A
U <sub>BE1</sub>	95.4	U <sub>NaI</sub>	0.23
U <sub>BE2</sub>	95.5	U <sub>NaI</sub>	0.25
U <sub>BE3</sub>	95.3	U <sub>NaI</sub>	0.19
U <sub>BE4</sub>	95.4	U <sub>NaI</sub>	0.20
F1_PPAC=	-758	NaI(Tl)_1=	600V
F2_PPAC=	-751	NaI(Tl)_2=	
F3_PPAC1=	-755	NaI(Tl)_3=	
F3_PPAC2=	-755	BaF=	1352.6



D1: 514.743 D2: 514.965

RIPS Control Summary 2004/06/05 08:38:12

1.3167	120.3809	120.454		
1.5337	96.1520	94.925	194.6	50.1
0.7725	91.2800	91.382		
0.0000	0.1469	0.000	24.0	50.0
0.2777	286.275	288.322	24.0	
0.0000	0.1469	0.000	24.0	-94.8
0.5572	49.4780	49.404	23.8	-4.9
0.7942	62.0110	62.140		
0.6197	55.2067	55.417		
0.0000	0.1469	0.000		
0.2777	297.6403	296.676	119.8	
0.0000	0.1469	0.000	-134.9	49.9
0.6468	76.4060	77.009		
1.1259	79.7753	80.046	5.0	50.0
1.0222	93.2305	93.241	5.0	
1.1110	107.2141	108.453		
1.4205	117.7172	116.172		
1.1106	107.1753	108.453		
FOCUS		1.8500	0	
	1.8500	1.8500		

6-1 05 04 8:48 prisca

Run87

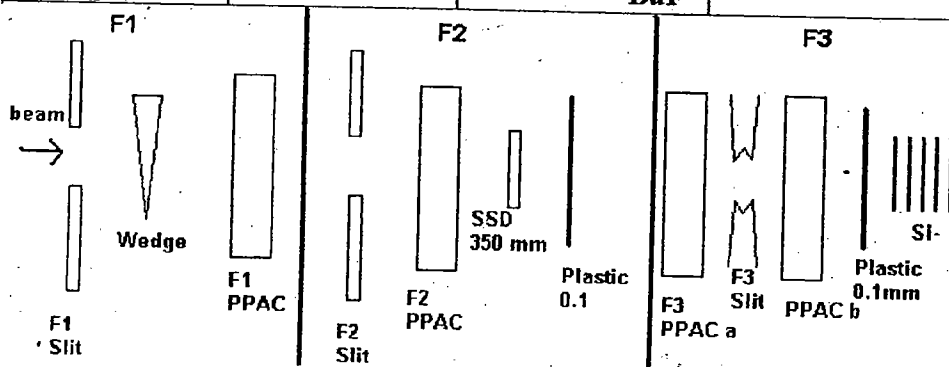
Start -- Sat Jun 5 08:20:54 2004  
 Stop -- Sat Jun 5 08:48:30 2004

Scaler Name : Total

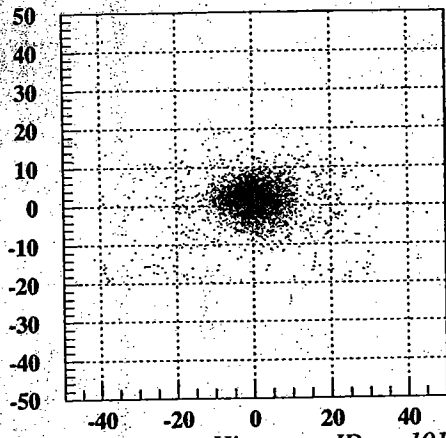
UNGATED :	1234095
GATED :	944733
NONE :	15486
F1PP T :	140
F2 SI :	0
CLEARs :	944647
F2PP T :	1215263
F3PPA T :	1106835
E1 :	1037409
PL 2 :	1196920
PL 3 :	1190816
CLOCK :	1654495
TGT NAI :	20748515
TGT BAF :	36721
MOMOTA :	337093
OKUNO :	7473
FC :	3813
MOMOTA1 :	1584200
MOMOTA2 :	145724692
MOMOTA3 :	127933269
OKUNO1 :	253315
OKUNO2 :	54846
OKUNO3 :	39655
F3PPB T :	1046980
LIVE TGT NAI :	15831063
LIVE TGT BAF :	28016
LIVE MOMOTA :	257270
LIVE OKUNO :	5681
LIVE FC :	2899
LIVE MOMOTA1 :	1212152
LIVE MOMOTA2 :	111489945
LIVE MOMOTA3 :	97929349
LIVE OKUNO1 :	192503
LIVE OKUNO2 :	41833

Run number:	88	Tape:	6	Name:	3MC
Description:	Dho = 1.87, Be92, F2PL trigger				
Date:	6/5	Time:	09:13		
Brho1:	1.87	Brho2:	1.87		
NMR1:	520.240	NMR2:	520.496		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	35 mm	F1PPAC:	IN OUT		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN OUT	F3PPACs:	IN OUT		
F2 Scint:	IN OUT	F3 Scint:	IN OUT		
Rips control	yes/no	price	SCA file		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

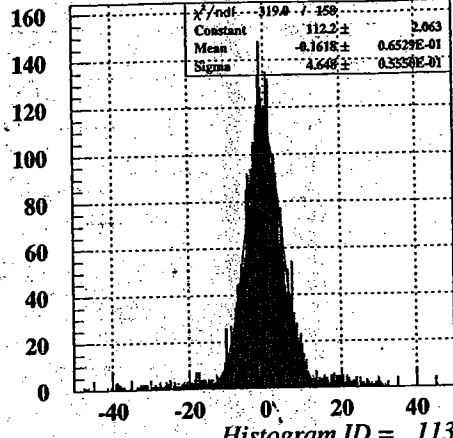
Bias voltage table (please compare to previous values)			
U dE-		I dE-	
U E1-		I E1-	
U E2-		I E2-	
U E3-		I E3-	
U E4-		I E4-	
F1_PPAC=		NaI(Tl) 1=	
F2_PPAC=		NaI(Tl) 2=	
F3_PPACA=		NaI(Tl) 3=	
F3_PPACB=		BaF=	



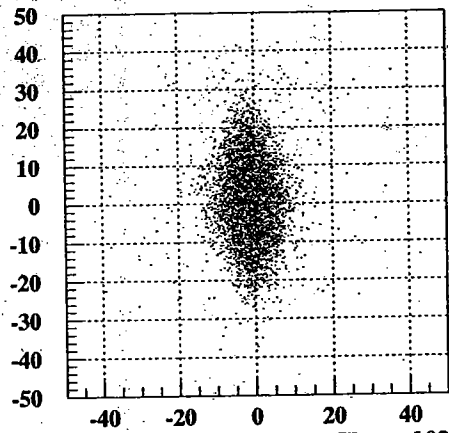




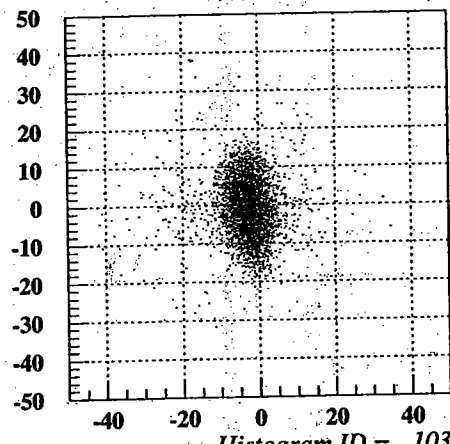
Histogram ID = 101  
pc2 xy



Histogram ID = 113  
Prox.(pc2 xy)



Histogram ID = 102  
pc3a xy



Histogram ID = 103  
pc3b xy

F2 SI :	0
CLEARs :	1292103
F2PP T :	1883506
F3PPA T :	1713557
E1 :	1617213
PL 2 :	1812695
PL 3 :	1803161
CLOCK :	1873454
TGT NAI :	21393680
TGT BAF :	39013
MOMOTA :	353414
OKUNO :	7941
FC :	4188
MOMOTA1 :	1713595
MOMOTA2 :	164230659
MOMOTA3 :	143928641
OKUNO1 :	269319
OKUNO2 :	58382
OKUNO3 :	42003
F3PPB T :	1652009
LIVE TGT NAI :	14977873
LIVE TGT BAF :	27350
LIVE MOMOTA :	247440
LIVE OKUNO :	5560
LIVE FC :	2975
LIVE MOMOTA1 :	1208662
LIVE MOMOTA2 :	115963371
LIVE MOMOTA3 :	101702230
LIVE OKUNO1 :	188614
LIVE OKUNO2 :	40874
LIVE OKUNO3 :	29532
LIVE_CLOCK :	1326085

PIPS Control Summary

2004/06/05 09:23:41

1.3167	121.6932	121.568		
1.5337	97.1935	95.756	194.6	50.1
0.7725	92.2682	92.248		
0.0000	0.1469	0.000	24.0	50.0
0.2777	289.3769	291.496	24.0	
0.0000	0.1469	0.026	24.0	-94.8
0.5572	50.0301	50.004	23.8	-4.9
0.7942	62.6982	62.883		
0.6197	55.8208	56.069		
0.0000	0.1469	0.021		
0.2777	300.8897	299.585		
0.0000	0.1469	0.000	119.8	
0.6468	77.2334	78.310	-134.9	49.9
1.1259	80.6354	80.757	5.0	50.0
1.0222	94.2493	94.463	5.0	
1.1110	108.3745	109.676		
1.4205	118.9867	117.394		
1.1106	108.3354	109.676		
FOCUS	1.8700		0	
1.8700	1.8700			

D1 = 520.41 (MT) D2 = 520.492 (MT)

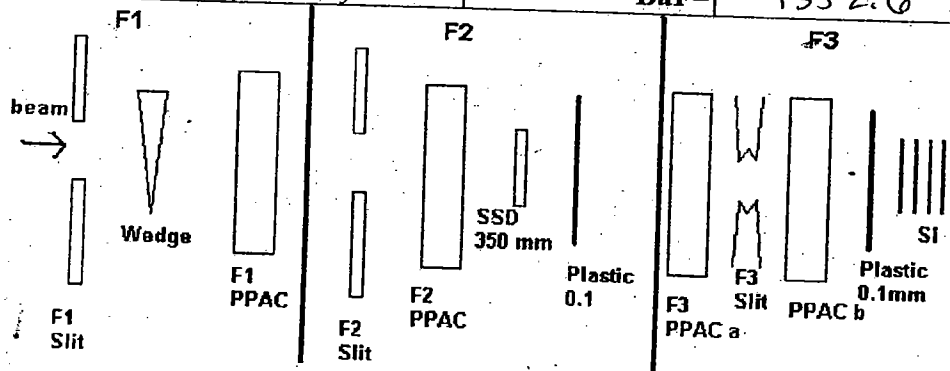
Run88

Start -- Sat Jun 5 09:13:31 2004  
 Stop -- Sat Jun 5 09:44:47 2004

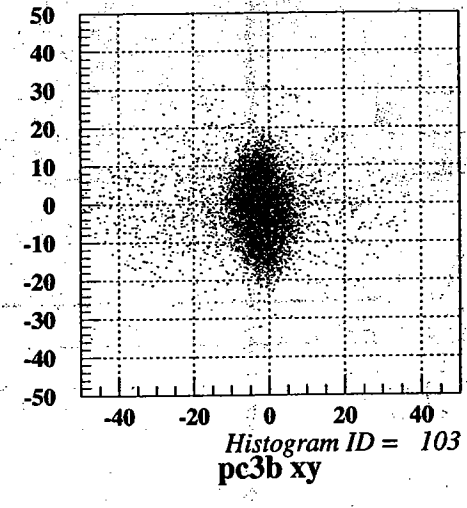
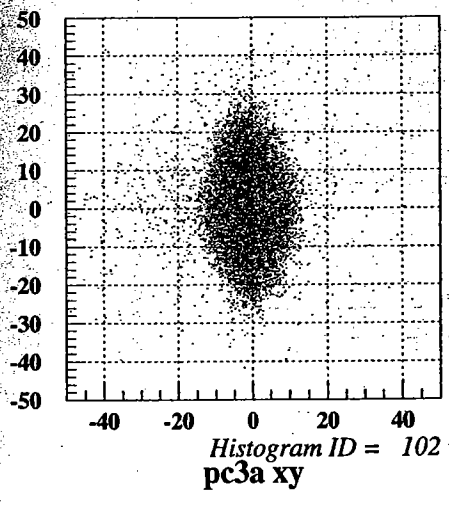
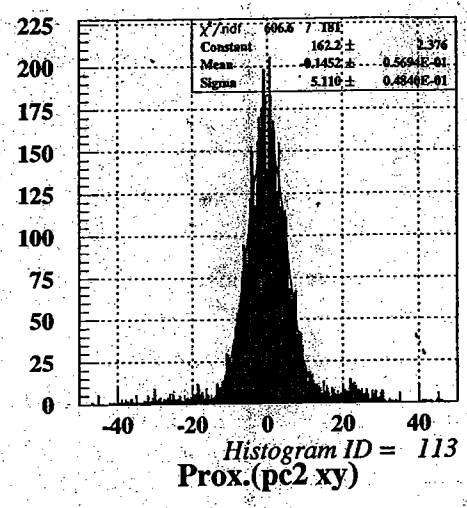
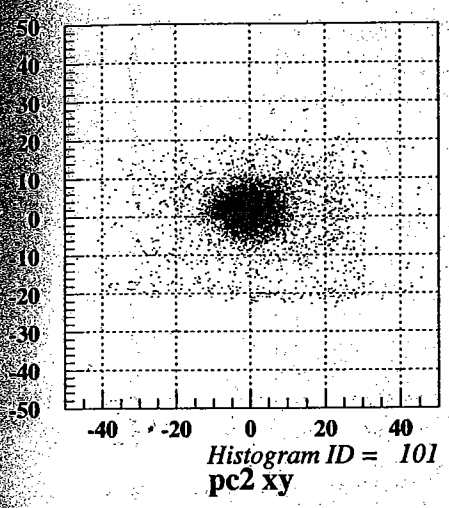
Scaler Name :	Total
UNGATED :	1837177
GATED :	1292289
NONE :	21182
F1PP T :	157
F2 SI :	0
CLEARs :	1292103
F2PP T :	1883506
F3PPA T :	1713557
E1 :	1617213
PL 2 :	1812695
PL 3 :	1803161
CLOCK :	1873454
TGT NAI :	21393680
TGT BAF :	39013
MOMOTA :	353414
OKUNO :	7941
FC :	4188
MOMOTA1 :	1713595
MOMOTA2 :	164230659
MOMOTA3 :	143928641
OKUNO1 :	269319
OKUNO2 :	58382
OKUNO3 :	42003
F3PPB T :	1652009
LIVE TGT NAI :	14977873
LIVE TGT BAF :	27350
LIVE MOMOTA :	247440
LIVE OKUNO :	5560
LIVE FC :	2975
LIVE MOMOTA1 :	1208662
LIVE MOMOTA2 :	115963371
LIVE MOMOTA3 :	101702230
LIVE OKUNO1 :	188614
LIVE OKUNO2 :	40874
LIVE OKUNO3 :	29532
LIVE_CLOCK :	1326085

Run number:	89	Type:	6	Name:	JMC
Description:	Brho = 1.87 Ta166, F2 PL trigger				
Date:	6/5	Time:	0951		
Brho1:	1.87	Brho2:	1.87		
NMR1:	520.241	NMR2:	520.504		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	±5 mm	F1PPAC:	IN (OUT)		
Wedge:	(none)	100mg/Al	60mg/Al		
F2 slit:	(open)				
F2PPAC:	(IN) OUT	F3PPACs:	(IN) OUT		
F2 Scint:	(IN) OUT	F3 Scint:	(IN) OUT		
Rips control	(yes/no)	price	SCA file r081.txt		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

U d1=	95.5	I d1=	0.23 $\mu$ A
U E1=	95.4	I E1=	0.29
U E2=	95.5	I E2=	0.25
U E3=	95.3	I E3=	0.14
U E4=	95.4	I E4=	0.20
F1_PPAC=	-748	NaI(Tl) 1=	0.60 kv
F2_PPAC=	-751	NaI(Tl) 2=	
F3_PPACA=	-755	NaI(Tl) 3=	
F3_PPACB=	-755	BaF=	1352.6



~~Review 89~~  $T_{90} = T_a$ ,  $BP = 1.87$ ,  $Trigger = F2\ plav$



F2PP T :	848920
F3PPA T :	827909
E1 :	828648
PL 2 :	892694
PL 3 :	911250
CLOCK :	1016716
TGT_NAI :	6640785
TGT_BAF :	11717
MOMOTA :	236324
OKUNO :	20880
FC :	2311
MOMOTA1 :	1024319
MOMOTA2 :	89976511
MOMOTA3 :	78959988
OKUNO1 :	357566
OKUNO2 :	86606
OKUNO3 :	44458
F3PPB T :	774125
LIVE TGT_NAI :	4700392
LIVE TGT_BAF :	8315
LIVE MOMOTA :	167257
LIVE OKUNO :	14790
LIVE FC :	1686
LIVE MOMOTA1 :	730188
LIVE MOMOTA2 :	64372279
LIVE MOMOTA3 :	56528813
LIVE OKUNO1 :	253454

NPS Control Summary 2004/06/05 10:03:55

1.3167	121.6932	121.568		
1.5337	97.1935	95.993	95.8	50.1
0.7725	92.2682	92.161		
0.0000	0.1469	0.000	24.0	50.0
0.2777	289.3769	291.231	24.0	
0.0000	0.1469	0.000	24.0	-94.8
0.5572	50.0301	50.004	23.8	-4.9
0.7942	62.6982	62.697		
0.6197	55.8208	56.069		
0.0000	0.1469	0.000		
0.2777	300.889	300.114	119.8	
0.0000	0.1469	0.000	-134.9	49.9
0.6468	77.2934	78.147		
1.1259	80.6354	80.916	5.0	50.0
1.0222	94.2493	94.181	5.0	
1.1110	108.3749	109.787		
1.4205	118.9867	117.530		
1.1106	108.335	109.676		
Focus		1.8700	0	
	1.8700	1.8700		

D1 : 520.240

D2 : 520.504

Run89

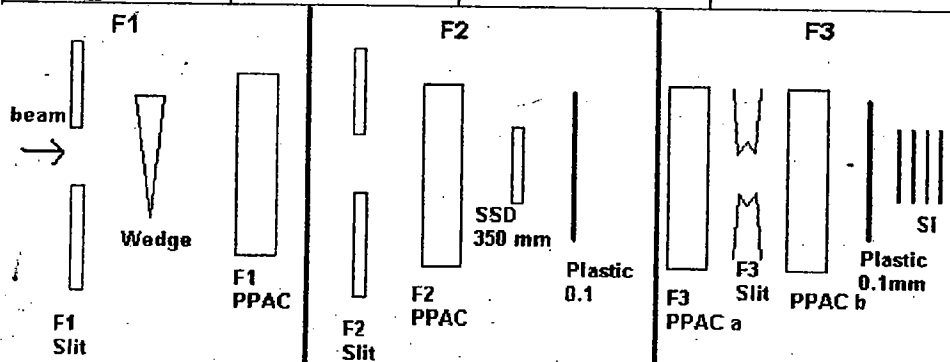
Start -- Sat Jun 5 09:51:06 2004  
 Stop -- Sat Jun 5 10:09:37 2004

Scaler Name : Total

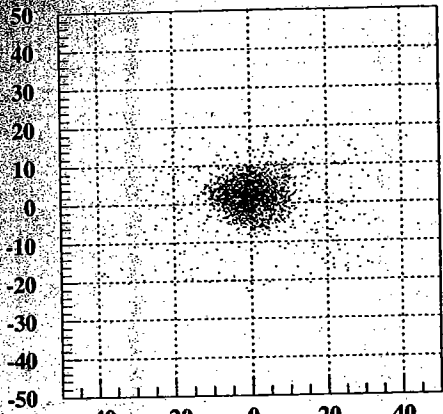
UNGATED :	987171
GATED :	702070
NONE :	11508
F1PP T :	75
F2 SI :	0
CLEARs :	701989
F2PP T :	848920
F3PPA T :	827909
E1 :	828648
PL 2 :	892694
PL 3 :	911250
CLOCK :	1016716
TGT NAI :	6640785
TGT BAF :	11717
MOMOTA :	236324
OKUNO :	20880
FC :	2311
MOMOTA1 :	1024319
MOMOTA2 :	89976511
MOMOTA3 :	78959988
OKUNO1 :	357566
OKUNO2 :	86606
OKUNO3 :	44458
F3PPB T :	774125
LIVE TGT NAI :	4700392
LIVE TGT BAF :	8315
LIVE MOMOTA :	167257
LIVE OKUNO :	14790
LIVE FC :	1686
LIVE MOMOTA1 :	730188
LIVE MOMOTA2 :	64372279
LIVE MOMOTA3 :	56528813
LIVE OKUNO1 :	253454
LIVE OKUNO2 :	61287

Run number:	90	Tape:	6	Name:	SMC
Description:	Brho=1.89, target Ta 166 trigger F2Plastic				
Date:	6/5	Time:	<del>102</del> -1101		
Brho1:	1.89	Brho2:	1.89		
NMR1:		NMR2:			
Target:	<del>Be(92)</del>	Ta(166)	Be(115) Be(181)		
F1 slit:	<del>5</del> mm	F1PPAC:	IN OUT		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN OUT	F3PPACs:	IN OUT		
F2 Scint:	IN OUT	F3 Scint:	IN OUT		
Rips control	yes/no	prisca	SCA file 0020,181		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

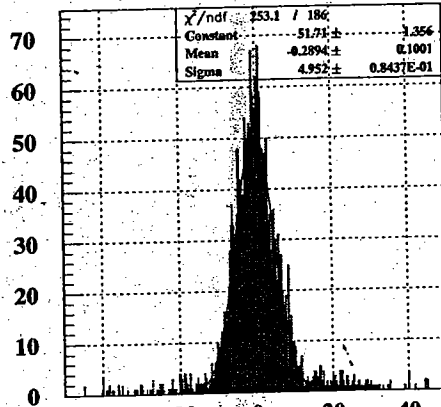
Bias voltage table (please compare to previous values)	
U dE=	I dE=
U E1=	I E1=
U E2=	I E2=
U E3=	I E3=
U E4=	I E4=
F1_PPAC=	NaI(Tl) 1=
F2_PPAC=	NaI(Tl) 2=
F3_PPACA=	NaI(Tl) 3=
F3_PPACB=	BaF=



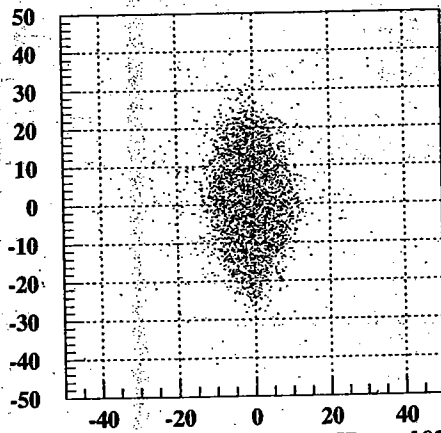
Run 90  $T_{90} = T_n (166)$ ,  $BP_1 = 1.89$ ,  $F_2 \text{ pla } \frac{1}{111}$



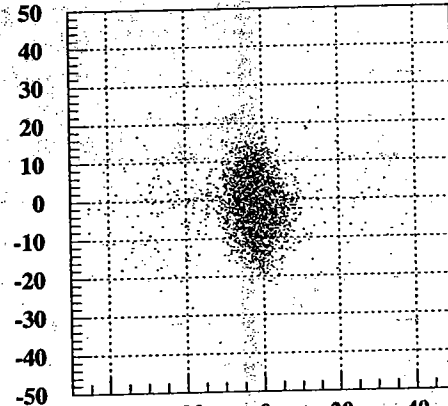
Histogram ID = 101  
pc2 xy



Histogram ID = 113  
Prox.(pc2 xy)



Histogram ID = 102  
pc3a xy



Histogram ID = 103  
pc3b xy

$D_1 = 525.767$

$D_2 = 526.010$

OKUNO :	46145
FC :	3954
MOMOTA1 :	1967391
MOMOTA2 :	162748602
MOMOTA3 :	143062340
OKUNO1 :	796136
OKUNO2 :	192864
OKUNO3 :	98129
F3PPB T :	1999022
LIVE TGT NAI :	9378610
LIVE TGT BAF :	15908
LIVE MOMOTA :	336051
LIVE OKUNO :	29285
LIVE FC :	2574
LIVE MOMOTA1 :	1256177
LIVE MOMOTA2 :	104290422
LIVE MOMOTA3 :	91745894
LIVE OKUNO1 :	505503
LIVE OKUNO2 :	122714
LIVE OKUNO3 :	62512
LIVE CLOCK :	1172837

*Atkinson C*

P125 Control Summary

2004/06/05 11:20:22

013167	123.005	123.128		
119337	98.2351	97.180	95.9	50.1
017225	93.2564	93.634		50.0
010000	0.1469	0.000	24.0	
012777	292.478	294.406	24.0	
010000	0.1469	0.000	24.0	-94.8
015572	50.5823	50.495	23.8	-4.9
012942	63.3854	63.564		
013197	56.4348	56.722		
010000	0.1469	0.021		
012777	304.110	303.022		
010000	0.1469	0.000	119.8	
016368	78.0609	79.204	-134.9	49.9
111259	81.4955	81.707	5.0	50.0
110222	95.2681	95.309	5.0	
111110	109.535	111.011		
111205	120.256	119.025		
111106	109.495	110.789		
		1.8900	0	
	1.8900	1.8900		

06/05/04 11:32 prisca

Run90

Start -- Sat Jun 5 11:01:52 2004  
 Stop -- Sat Jun 5 11:32:22 2004

Scaler Name : Total

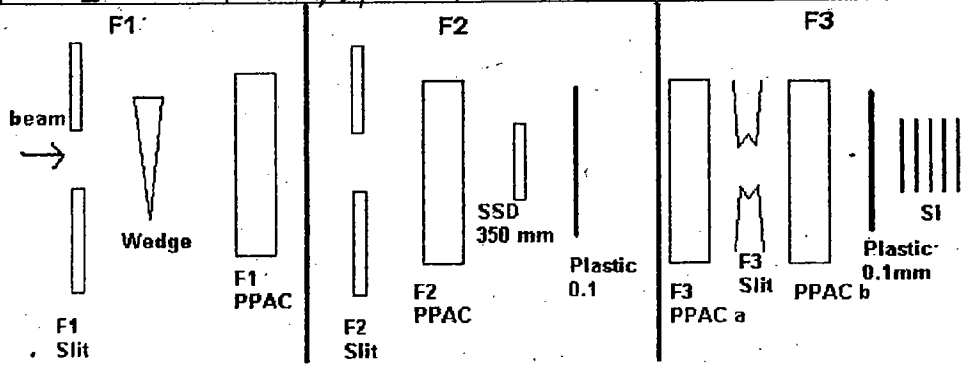
UNGATED :	2457371
GATED :	1573298
NONE :	25786
F1PP T :	170
F2 SI :	0
CLEARs :	1572947
F2PP T :	2161795
F3PPA T :	2118469
E1 :	2155261
PL 2 :	2264450
PL 3 :	2302266
CLOCK :	1826375
TGT NAI :	14775851
TGT BAF :	24894
MOMOTA :	528456
OKUNO :	46145
FC :	3954
MOMOTA1 :	1967391
MOMOTA2 :	162748602
MOMOTA3 :	143062340
OKUNO1 :	796136
OKUNO2 :	192864
OKUNO3 :	98129
F3PPB T :	1999022
LIVE TGT NAI :	9378610
LIVE TGT BAF :	15908
LIVE MOMOTA :	336051
LIVE OKUNO :	29285
LIVE FC :	2574
LIVE MOMOTA1 :	1256177
LIVE MOMOTA2 :	104290422
LIVE MOMOTA3 :	91745894
LIVE OKUNO1 :	505503
LIVE OKUNO2 :	122714
LIVE OKUNO3 :	62512
LIVE CLOCK :	1172837

*A. Hamada*

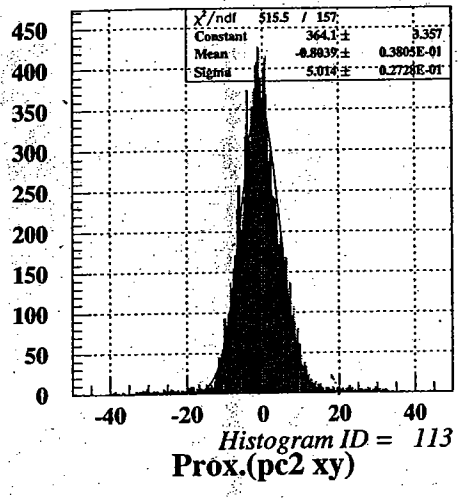
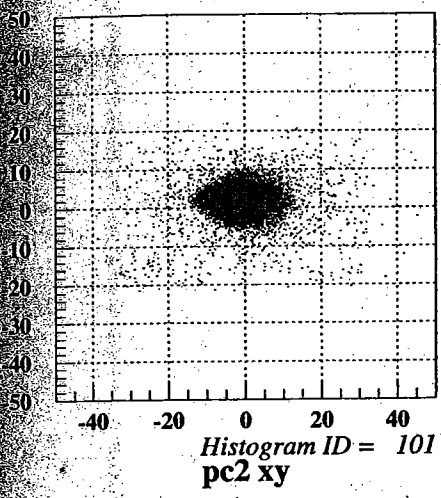


Run number:	91	Tape:	6	Name:	JMC
Description:	Brho = 1.89 $^{92}\text{Sr}$ $^{92}\text{Zr}$ trigger = F2P19				
Date:	6/5	Time:			
Brho1:	1.89	Brho2:	1.89		
NMR1:	525.764	NMR2:	526.016		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	$\pm 5$ mm	F1PPAC:	IN OUT		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN OUT	F3PPACs:	IN OUT		
F2 Scint:	IN OUT	F3 Scint:	IN OUT		
Rips control	yes/no	prisca	SCA file		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

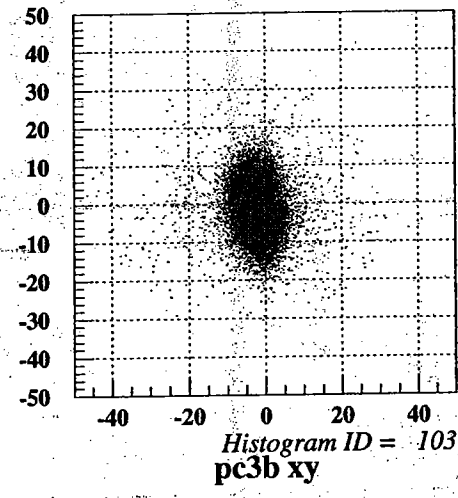
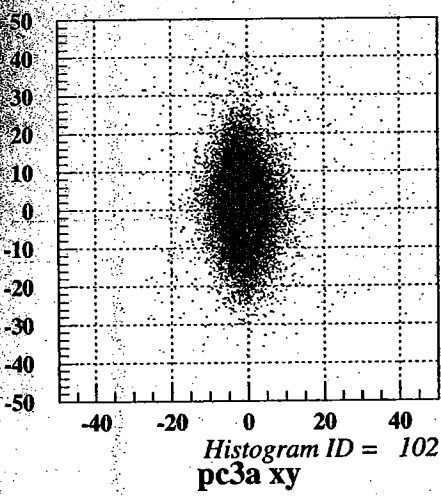
U dE-	95.5	I dE-	0.25
U E1-	95.4	I E1-	0.31
U E2-	95.5	I E2-	0.25
U E3-	95.3	I E3-	0.20
U E4-	95.4	I E4-	0.14
F1_PPAC=	-744	NaI(Tl) 1=	0.60
F2_PPAC=	-754	NaI(Tl) 2=	
F3_PPACA=	-754 -755	NaI(Tl) 3=	
F3_PPACB=	-754 -755	BaF=	1352.4



Run 91 Be (92) , BP = 1.89 , F2pla trigger



D2 =  
D2 =



Attenuator Changer  
WAC 460  
WNG 42, 43 300

- E1 : 900492
- PL 2 : 962370
- PL 3 : 960555
- CLOCK : 1810635
- TGT NAI : 7626454
- TGT BAF : 13726
- MOMOTA : 130681
- OKUNO : 2861
- FC : 4061
- MOMOTA1 : 1362682
- MOMOTA2 : 156924941
- MOMOTA3 : 137608313
- OKUNO1 : 97002
- OKUNO2 : 20989
- OKUNO3 : 15170
- F3PPB T : 905574
- LIVE TGT NAI : 6190052
- LIVE TGT BAF : 11089
- LIVE MOMOTA : 106480
- LIVE OKUNO : 2327
- LIVE FC : 3404
- LIVE MOMOTA1 : 1116450
- LIVE MOMOTA2 : 128659483
- LIVE MOMOTA3 : 112868424
- LIVE OKUNO1 : 78512
- LIVE OKUNO2 : 17018
- LIVE OKUNO3 : 12379
- LIVE\_CLOCK : 1486220

continuum  
#8.  
Run #9:  
junk

**PIPS Control Summary** 2004/06/05 12:19:55

1.3167	123.005	123.128		
1.5337	98.2351	97.180	194.6	
0.7725	93.2564	93.634		50.1
0.0000	0.1469	0.000	24.0	50.0
0.2777	292.478	294.670	24.0	
0.0000	0.1469	0.000	24.0	-94.8
0.5572	50.5823	50.549		
0.7942	63.3854	63.502	23.8	-4.9
0.6197	56.4348	56.613		
0.0000	0.1469	0.000		
0.2777	304.110	303.287		
0.0000	0.1469	0.000	119.8	
0.6468	78.0609	78.286	-134.9	49.9
1.1259	81.4955	81.627	5.0	50.0
1.0222	95.2681	95.309		
1.1110	109.535	111.011	5.0	
1.4205	120.256	119.025		
1.1106	109.495	110.789		
TOTALS		1.8900	0	
1.8900		1.8900		

*Attenuator Changer*

*SNAC Y60 > 1*

*SWG Y2/13 300*

6/05/04 12:30 prisca

Run91

Start -- Sat Jun 5 11:59:41 2004

Stop -- Sat Jun 5 12:29:54 2004

Scaler Name : Total

UNGATED :	972040
GATED :	792067
NONE :	12984
F1PP T :	90
F2 SI :	0
CLEARs :	792025
F2PP T :	1000889
F3PPA T :	927349
E1 :	900492
PL 2 :	962370
PL 3 :	960555
CLOCK :	1810635
TGT NAI :	7626454
TGT BAF :	13726
MOMOTA :	130681
OKUNO :	2861
FC :	4061
MOMOTA1 :	1362682
MOMOTA2 :	15692491
MOMOTA3 :	137608313
OKUNO1 :	97002
OKUNO2 :	20989
OKUNO3 :	15170
F3PPB T :	905574
LIVE TGT NAI :	6190052
LIVE TGT BAF :	11089
LIVE MOMOTA :	106480
LIVE OKUNO :	2327
LIVE FC :	3404
LIVE MOMOTA1 :	1116450
LIVE MOMOTA2 :	128659483
LIVE MOMOTA3 :	112868424
LIVE OKUNO1 :	78512
LIVE OKUNO2 :	17018
LIVE OKUNO3 :	12379
LIVE_CLOCK :	1486220

*TAPE C*

*this run*

*problems*

*the tape d*

*no saw m*

*was ju*

*continuu*

*#8.*

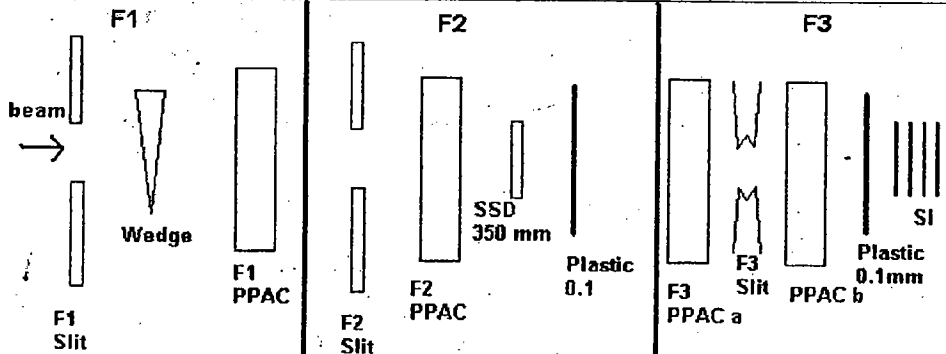
*Run #9:*

*junk*

Run number:	93	Tape:	8	Name:	JMC
Description:	Brho = 1.91 tgt = Be92 - wiggler: FZPL				
Date:	6/5	Time:	1253		
Brho1:	1.91	Brho2:	1.91		
NMR1:		NMR2:			
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	15 mm	F1PPAC:	IN	OUT	
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN	OUT	F3PPACs:	IN	OUT
F2 Scint:	IN	OUT	F3 Scint:	IN	OUT
Rips control	yes/no	prisca	SCA file: 10093.tst		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

Bias voltage table (please compare to previous values)

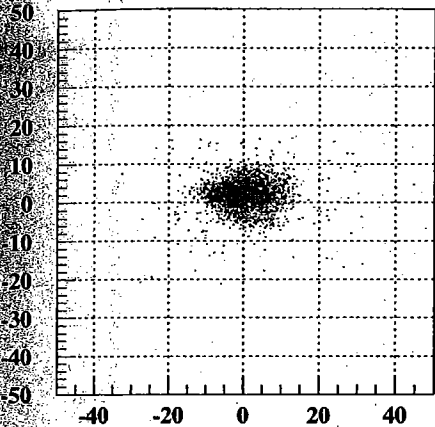
U dE=	95.5V	I dE=	0.27 $\mu$ A
U E1=	95.4	I E1=	0.25-0.38
U E2=	95.45	I E2=	0.20-0.25
U E3=	95.3	I E3=	0.14
U E4=	95.4	I E4=	0.20
F1_PPAC=	-748	NaI(Tl) 1=	0.60kV
F2_PPAC=	-751	NaI(Tl) 2=	
F3_PPACA=	-755	NaI(Tl) 3=	
F3_PPACB=	-755	BaF=	135 2.0 V



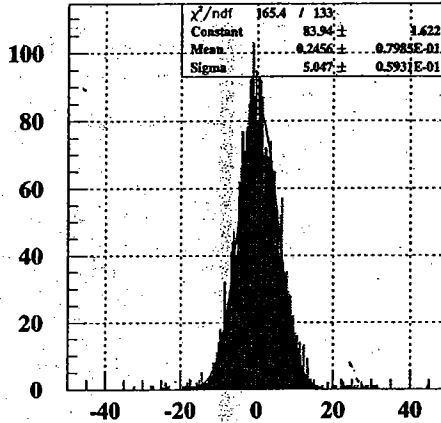
I-E1 is increasing.

Run 93 . Be92

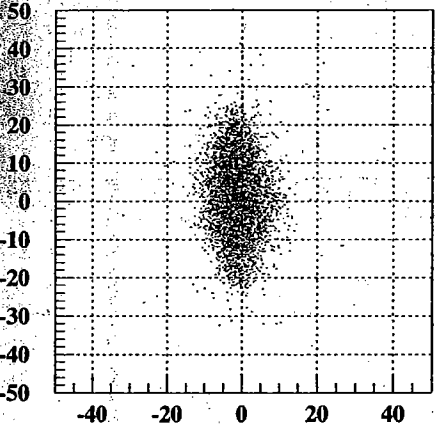
Brho = 1.891



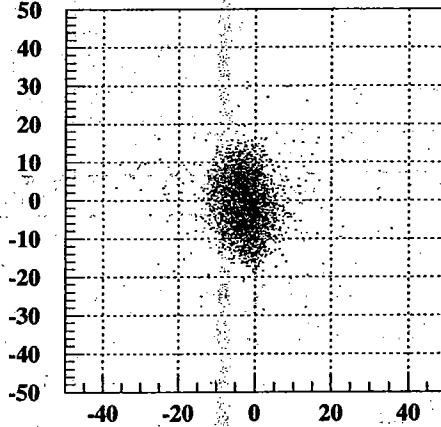
Histogram ID = 101  
pc2 xy



Histogram ID = 113  
Prox.(pc2 xy)



Histogram ID = 102  
pc3a xy



Histogram ID = 103  
pc3b xy

CLEARs :	408213
F2PP T :	608108
F3PPA T :	569534
E1 :	555093
PL 2 :	583344
PL 3 :	585272
CLOCK :	601816
TGT NAI :	2931542
TGT BAF :	5291
MOMOTA :	51073
OKUNO :	1081
FC :	1297
MOMOTA1 :	458109
MOMOTA2 :	52364586
MOMOTA3 :	46052229
OKUNO1 :	37529
OKUNO2 :	8139
OKUNO3 :	5981
F3PPB T :	561545
LIVE TGT_NAI :	2039708
LIVE TGT_BAF :	3679
LIVE MOMOTA :	35381
LIVE OKUNO :	743
LIVE FC :	934
LIVE MOMOTA1 :	319899
LIVE MOMOTA2 :	36572951
LIVE MOMOTA3 :	32180797
LIVE OKUNO1 :	26210
LIVE OKUNO2 :	5629
LIVE OKUNO3 :	4149
LIVE_CLOCK :	421166

note

Run # 94 3 jun  
Cyclotron prod

**RIPS Control Summary** 2004/06/05 13:11:33

1.3167	124.3178	124.354		
1.5337	99.2766	98.010	194.6	50.1
0.7725	94.2446	94.327		
0.0000	0.1469	0.000	24.0	50.0
0.2777	295.5808	297.580	24.0	
0.0000	0.1469	0.000	24.0	-94.8
0.5572	51.1344	51.094	23.8	-4.9
0.7942	64.0726	64.183		
0.6197	57.0489	57.320		
0.0000	0.1469	0.000		
0.2777	307.417	306.724		
0.0000	0.1469	0.000	119.8	
0.6468	78.8883	80.262	-134.9	49.9
1.1259	82.3555	82.498	5.0	50.0
1.0222	96.2869	96.343	5.0	
1.1110	110.695	112.235		
1.4205	121.525	119.840		
1.1106	110.655	111.901		
TOTALS:		1.9100	0	
1.9100	1.9100			

6/05/04 13:05 prisca

Run93

Start -- Sat Jun 5 12:53:15 2004  
Stop -- Sat Jun 5 13:05:02 2004

Scaler Name :	Total
UNGATED :	583576
GATED :	408257
NONE :	6692
F1PP T :	28
F2 SI :	0
CLEARs :	408213
F2PP T :	608108
F3PPA T :	569534
E1 :	555093
PL 2 :	583344
PL 3 :	585272
CLOCK :	601816
TGT NAI :	2931542
TGT BAF :	5291
MOMOTA :	51073
OKUNO :	1081
FC :	1297
MOMOTA1 :	458109
MOMOTA2 :	52364586
MOMOTA3 :	46052229
OKUNO1 :	37529
OKUNO2 :	8139
OKUNO3 :	5981
F3PPB T :	561545
LIVE TGT NAI :	2039708
LIVE TGT BAF :	3679
LIVE MOMOTA :	35381
LIVE OKUNO :	743
LIVE FC :	934
LIVE MOMOTA1 :	319899
LIVE MOMOTA2 :	36572951
LIVE MOMOTA3 :	32180797
LIVE OKUNO1 :	26210
LIVE OKUNO2 :	5629
LIVE OKUNO3 :	4149
LIVE_CLOCK :	421166

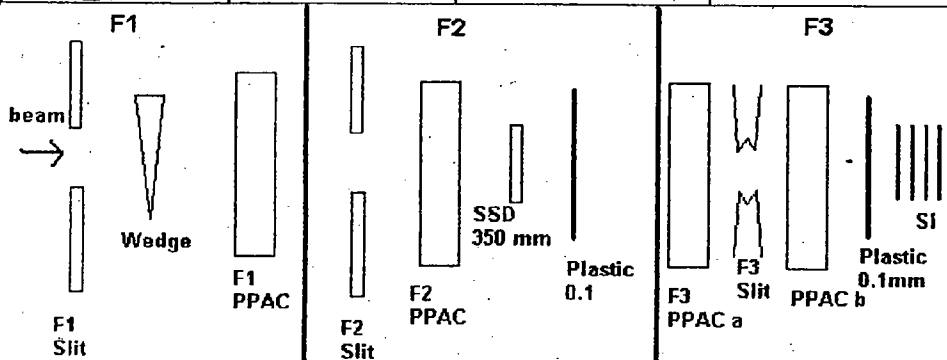
*Run 93  
HV prob*

*note*

*Run # 94 3 Jun  
Cyclotron prob*

Run number:	995	Tape: 8	Name: JMC
Description:	Same as Run 93, Brho = 1.91, t <sub>92</sub> = Be 92, t <sub>93</sub> trigger		
Date:	6/5	Time:	1316
Brho1:	1.91	Brho2:	1.91
NMR1:		NMR2:	
Target:	Be(92)	Ta(166)	Be(115) Be(181)
F1 slit:	15 mm	F1PPAC:	IN OUT
Wedge:	none	100mg/Al	60mg/Al
F2 slit:	open		
F2PPAC:	IN OUT	F3PPACs:	IN OUT
F2 Scint:	IN OUT	F3 Scint:	IN OUT
Rips control	yes/no	prisca	SCA file
Trigger:	F1 PPAC/F1Plastic/F2 Plastic		

Bias voltage table (please compare to previous values)			
U dE=		I dE=	
U E1=		I E1=	
U E2=		I E2=	
U E3=		I E3=	
U E4=		I E4=	
F1_PPAC=		NaI(Tl)_1=	
F2_PPAC=		NaI(Tl)_2=	
F3_PPACA=		NaI(Tl)_3=	
F3_PPACB=		BaF=	



Run ended due to L3NAC problems after only a few minutes.

6:05:04.13:20

prisca

Run95

Start -- Sat Jun 5 13:16:39 2004  
Stop -- Sat Jun 5 13:20:37 2004

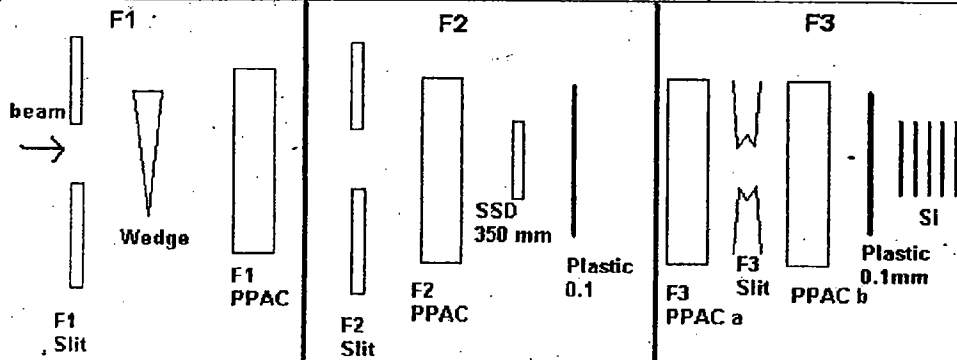
Scaler Name : Total

UNGATED :	169446
GATED :	120070
NONE :	1968
F1PP T :	6
F2 SI :	0
CLEARs :	120049
F2PP T :	176598
F3PPA T :	165361
E1 :	161067
PL 2 :	169359
PL 3 :	170050
CLOCK :	170414
TGT NAI :	837020
TGT BAF :	1474
MOMOTA :	14822
OKUNO :	308
FC :	388
MOMOTA1 :	129330
MOMOTA2 :	14804460
MOMOTA3 :	13021505
OKUNO1 :	10723
OKUNO2 :	2445
OKUNO3 :	1701
F3PPB T :	163114
LIVE TGT NAI :	590012
LIVE TGT BAF :	1022
LIVE MOMOTA :	10477
LIVE OKUNO :	218
LIVE FC :	284
LIVE MOMOTA1 :	91664
LIVE MOMOTA2 :	10512079
LIVE MOMOTA3 :	9251228
LIVE OKUNO1 :	7653
LIVE OKUNO2 :	1742
LIVE OKUNO3 :	1234
LIVE CLOCK :	121473



Run number:	96	Tape:	8	Name:	SMLC
Description:	Same as Run 93, $\beta p = 1.91$ , Be92, trigger = F2Pl				
Date:	6/5	Time:	1332		
Brho1:	1.91	Brho2:	1.91		
NMR1:	531.297	NMR2:	531.650		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	$\pm 5$ mm	F1PPAC:	IN OUT		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN OUT	F3PPACs:	IN OUT		
F2 Scint:	IN OUT	F3 Scint:	IN OUT		
Rips control	yes/no	priscz	SCA file		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

U dE=	95.5	I dE=	0.28 $\mu$ A
U E1=	95.8	I E1=	0.41
U E2=	95.5	I E2=	0.25
U E3=	95.3	I E3=	0.19
U E4=	95.4	I E4=	0.20
F1_PPAC=	-798	NaI(Tl)_1=	0.60W
F2_PPAC=	-751	NaI(Tl)_2=	
F3_PPACA=	-755	NaI(Tl)_3=	
F3_PPACB=	-755	BaF=	1352.0



04.05.04 13:51

prisca

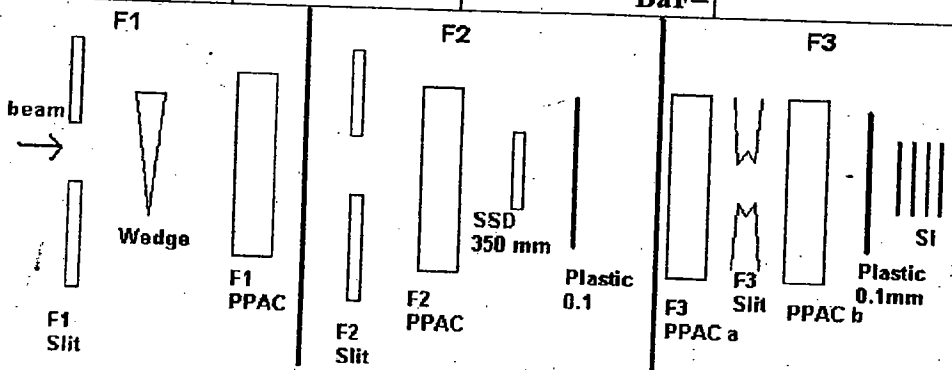
Run96

Start -- Sat Jun 5 13:32:35 2004  
Stop -- Sat Jun 5 13:51:10 2004

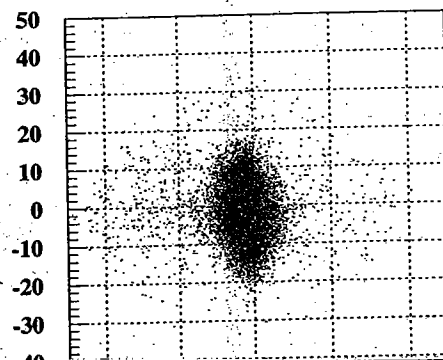
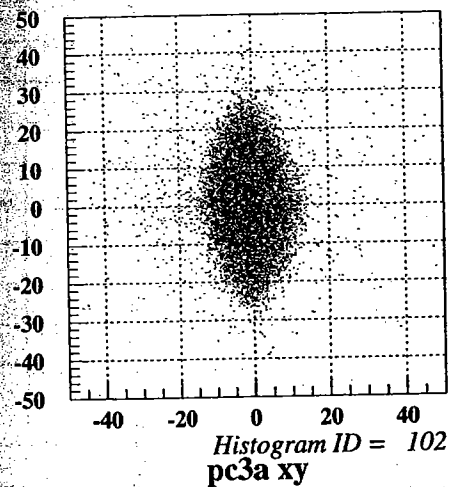
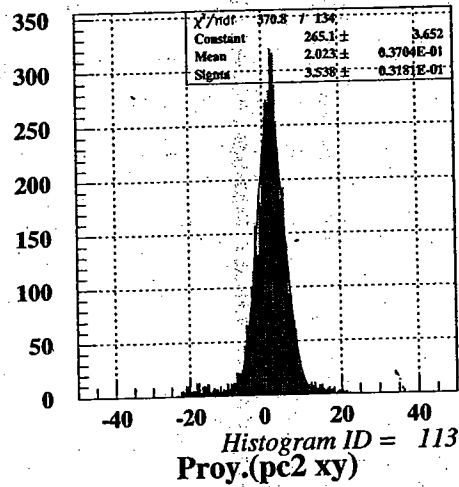
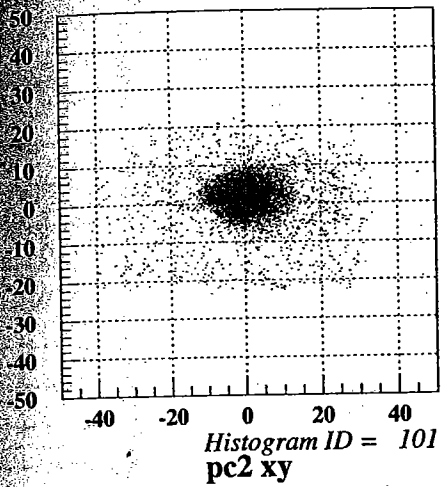
Scaler Name :	Total
UNGATED :	1011082
GATED :	734531
NONE :	12040
F1PP T :	38
F2 SI :	0
CLEARs :	734441
F2PP T :	1053812
F3PPA T :	985294
E1 :	957894
PL 2 :	1009952
PL 3 :	1012052
CLOCK :	1113768
TGT NAI :	4999607
TGT BAF :	9250
MOMOTA :	86234
OKUNO :	1864
FC :	2604
MOMOTA1 :	875182
MOMOTA2 :	96815646
MOMOTA3 :	85170706
OKUNO1 :	63629
OKUNO2 :	13866
OKUNO3 :	9995
F3PPB T :	971425
LIVE TGT NAI :	3611585
LIVE TGT BAF :	6680
LIVE MOMOTA :	62425
LIVE OKUNO :	1337
LIVE FC :	1941
LIVE MOMOTA1 :	637539
LIVE MOMOTA2 :	70526092
LIVE MOMOTA3 :	62079182
LIVE OKUNO1 :	45945
LIVE OKUNO2 :	9981

Run number:	97	Tape:	8	Name:	540
Description:	Bp=1.91 +gt=Ta166, trigger=F2P				
Date:	6/5	Time:	1400		
Brho1:	1.91	Brho2:	1.91		
NMR1:	531.296	NMR2:	531.798		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	15 mm	F1PPAC:	IN OUT		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN OUT	F3PPACs:	IN OUT		
F2 Scint:	IN OUT	F3 Scint:	IN OUT		
Rips control	yes/no	prisca	SCA file		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

Bias voltage table (please compare to previous values)	
U dE-	I dE-
U E1-	I E1-
U E2-	I E2-
U E3-	I E3-
U E4-	I E4-
F1_PPAC=	NaI(Tl) 1=
F2_PPAC=	NaI(Tl) 2=
F3_PPACA=	NaI(Tl) 3=
F3_PPACB=	BaF=



Run 97



6/05/04 14:29 prisca

Run97  
Start -- Sat Jun 5 14:00:14 2004  
Stop -- Sat Jun 5 14:29:10 2004

Scaler Name	Total
UNGATED	843053
GATED	702267
NONE	11512
F1PP T	78
F2 SI	0
CLEARs	702233
F2PP T	769934
F3PPA T	749186
E1	752239
PL 2	793819
PL 3	804309
CLOCK	1733332
TGT NAI	4319728
TGT BAF	7576
MOMOTA	156215
OKUNO	13665
FC	4041
MOMOTA1	1361734
MOMOTA2	150588724
MOMOTA3	147541318
OKUNO1	237013
OKUNO2	57537
OKUNO3	29478
F3PPB T	711211
LIVE TGT NAI	3583618
LIVE TGT BAF	6296
LIVE MOMOTA	129709
LIVE OKUNO	11356
LIVE FC	3338
LIVE MOMOTA1	1133990
LIVE MOMOTA2	125479347
LIVE MOMOTA3	123064332

RIPS Control Summary 2004/06/05 14:25:49

Beam ID	Beam Number	Beam Status	Beam Type	Beam Size	Beam Position
1	8167	124.3178	124.465		
1	5337	99.2766	98.129	95.9	50.1
0	7725	94.2446	94.586		
0	0000	0.1469	0.000	24.0	50.0
0	2777	295.5805	297.580	24.0	
0	0000	0.1469	0.000	24.0	-94.8
0	5572	51.1344	51.149	23.8	-4.9
0	7942	64.0726	64.183		
0	6197	57.0489	57.429		
0	0000	0.1469	0.000		
0	2777	307.4174	306.460	119.8	
0	0000	0.1469	0.000	-134.9	49.9
0	6468	78.8883	80.099		
1	1259	82.3555	82.577	5.0	50.0
1	0222	96.2869	96.437	5.0	
1	1110	110.6954	112.123		
1	4205	121.5257	119.840		

Run number:	98	Tape:	8	Name:	AS
Description:	Brho = 1.93 Tm, target Ta166, F2 plastic trigger				
Date:	6/5	Time:	14:37		
Brho1:	1.93	Brho2:	1.93		
NMRI:	536.799	NMR2:	537.155		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	± 5 mm	F1PPAC:	IN (OUT)		
Wedge:	(none)	100mg/Al	60mg/Al		
F2 slit:	(open)				
F2PPAC:	(IN) OUT	F3PPACs:	(IN) OUT		
F2 Scint:	(IN) OUT	F3 Scint:	(IN) OUT		
Rips control	(yes/no)	prisca	SCA file		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

Bias voltage table (please compare to previous values)			
U d1=	95.5	I d1=	0.26
U E1=	95.8	I E1=	0.43
U E2=	95.5	I E2=	0.26
U E3=	95.3	I E3=	0.14
U E4=	95.4	I E4=	0.26
F1_PPAC=	-748	NaI(Tl) 1=	0.60 k
F2_PPAC=	-751	NaI(Tl) 2=	88 "
F3_PPACA=	-755	NaI(Tl) 3=	"
F3_PPACB=	-755	BaF=	13.50

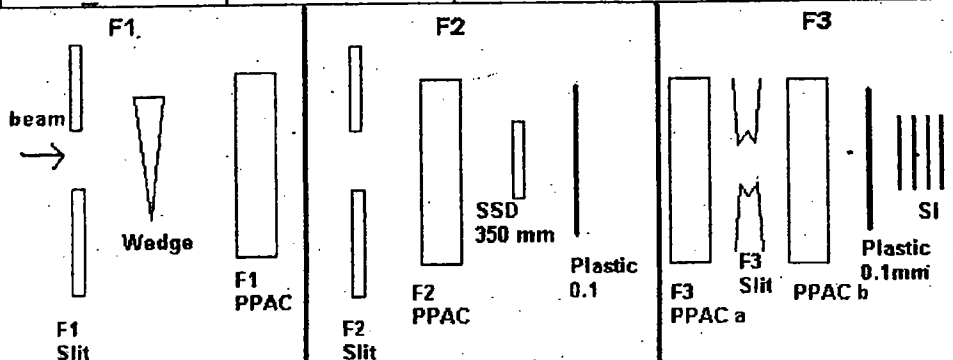
RIPS Control Summary			2004/06/05 14:50:14	
1.3167	125.630	125.691		
1.5337	100.318	99.078	95.8	50.1
0.7725	95.2328	95.366		50.0
0.0000	0.1469	0.000	24.0	
0.2777	298.682	300.754	24.0	-94.8
0.0000	0.1469	0.000	24.0	
0.5572	51.6865	51.694	23.8	-4.9
0.7942	64.7598	64.864		
0.6197	57.6630	57.973		
0.0000	0.1469	0.000		
0.2777	310.638	309.633		
0.0000	0.1469	0.079	119.8	49.9
0.6468	79.7157	80.831	-134.9	
1.1259	83.2156	83.368	5.0	50.0
1.0222	97.3057	97.565	5.0	
1.1110	111.855	113.236		
1.4205	122.795	121.063		
1.1106	111.815	113.124		



Run number:	99	Tape:	8	Name:	AS
Description:	Brho = 1.93 cont.				
Date:	6/5	Time:	15:02		
Brho1:	1.93	Brho2:	1.93		
NMRI:	536.799	NMR2:	537.345		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	± 5 mm	F1PPAC:	IN OUT		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN OUT	F3PPACs:	IN OUT		
F2 Scint:	IN OUT	F3 Scint:	IN OUT		
Rips control:	yes/no	prisc	SCA file		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

**Bias voltage table (please compare to previous values)**

U dE=		L dE=	
U E1=		L E1=	
U E2=		L E2=	
U E3=		L E3=	
U E4=		L E4=	
F1_PPAC=		NaI(Tl)_1=	
F2_PPAC=		NaI(Tl)_2=	
F3_PPACA=		NaI(Tl)_3=	
F3_PPACB=		BaF=	



6/05/04 15:19

prisca

Run99

Start -- Sat Jun 5 15:02:45 2004  
Stop -- Sat Jun 5 15:19:35 2004

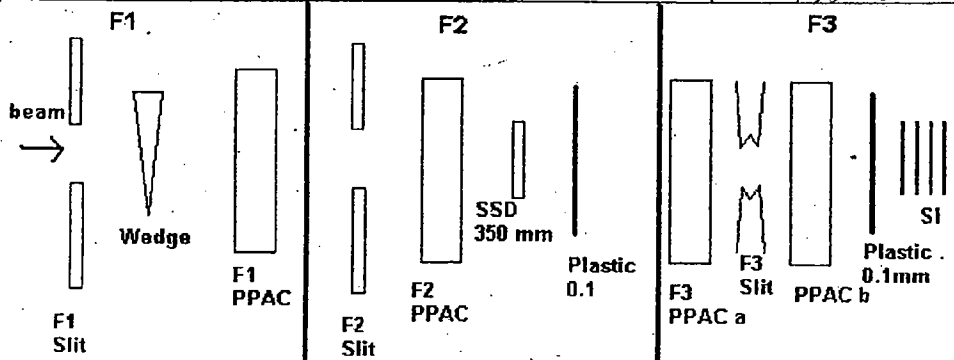
Scaler Name : Total

UNGATED :	557546
GATED :	452878
NONE :	7424
F1PP T :	51
F2 SI :	0
CLEARs :	452865
F2PP T :	519853
F3PPA T :	501123
E1 :	499812
PL 2 :	527268
PL 3 :	530848
CLOCK :	1008832
TGT NAI :	2378538
TGT BAF :	4390
MOMOTA :	87611
OKUNO :	7735
FC :	2405
MOMOTA1 :	787251
MOMOTA2 :	87246317
MOMOTA3 :	76665972
OKUNO1 :	131215
OKUNO2 :	31755
OKUNO3 :	16545
F3PPB T :	479239
LIVE TGT NAI :	1927621
LIVE TGT BAF :	3565
LIVE MOMOTA :	71111
LIVE OKUNO :	6326
LIVE FC :	1972
LIVE MOMOTA1 :	641836
LIVE MOMOTA2 :	71120395
LIVE MOMOTA3 :	62521782
LIVE OKUNO1 :	106436
LIVE OKUNO2 :	25840
LIVE OKUNO3 :	13540
LIVE_CLOCK :	823718



Run number:	100	Tape:	8	Name:	JMC
Description:	$B_p = 1.93, B_c = 96, FZPL$ trigger				
Date:	6/5	Time:	1530		
Brho1:	1.93	Brho2:	1.93		
NMR1:		NMR2:			
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	$\pm 5$ mm	F1PPAC:	IN (OUT)		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	(IN) OUT	F3PPACs:	(IN) OUT		
F2 Scint:	(IN) OUT	F3 Scint:	(IN) OUT		
Rips control	yes/no	prisca	SCA file		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

U dE-	0.28955V	I dE-	0.28 $\mu$ A
U E1-	0.95.8	I E1-	0.47
U E2-	95.5	I E2-	0.26
U E3-	95.3	I E3-	0.15
U E4-	95.4	I E4-	0.21
F1_PPAC=	-748	NaI(Tl) 1=	600V
F2_PPAC=	-751	NaI(Tl) 2=	
F3_PPACA=	-755	NaI(Tl) 3=	
F3_PPACB=	-755	BaF=	1351.8



Ruz. 700

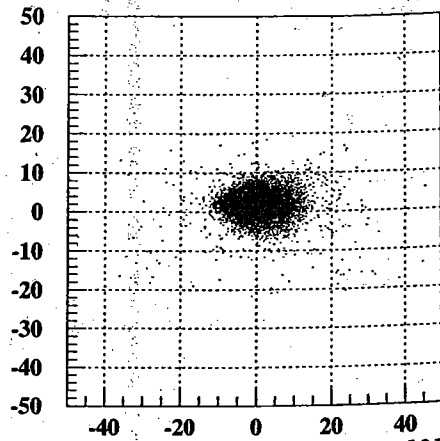
Be (92)

BP = 1.93

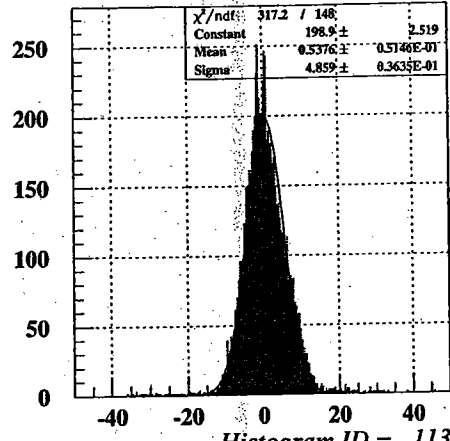
Thz = F2 pla

D1 = 536, 800

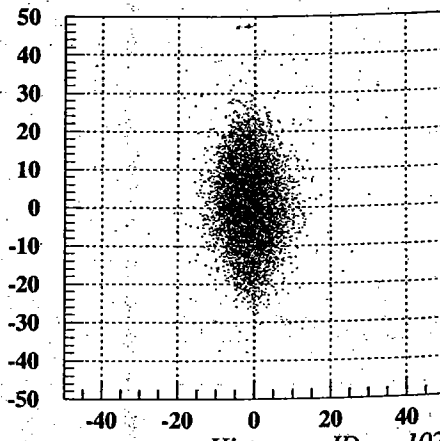
D2 = 537, 189



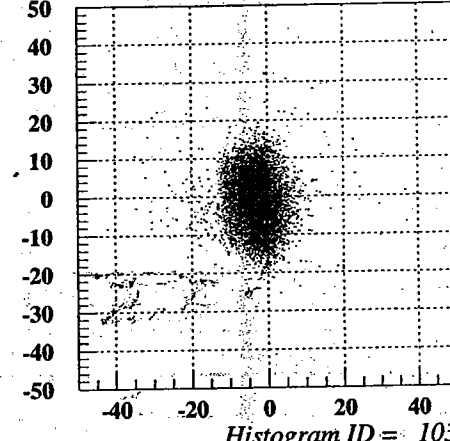
Histogram ID = 101  
pc2 xy



Histogram ID = 113  
Prox.(pc2 xy)



Histogram ID = 102  
pc3a xy



Histogram ID = 103  
pc3b xy

```

F2 SI : 0
CLEARS : 857539
F2PP T : 1158166
F3PPA T : 1081159
E1 : 1052482
PL 2 : 1100058
PL 3 : 1105315
CLOCK : 1687921
TGT NAI : 3336609
TGT BAF : 6415
MOMOTA : 56622
OKUNO : 1250
FC : 4000
MOMOTA1 : 1175010
MOMOTA2 : 144531824
MOMOTA3 : 126826598
OKUNO1 : 42475
OKUNO2 : 9349
OKUNO3 : 6887
F3PPB T : 1072280
LIVE TGT NAI : 2598259
LIVE TGT BAF : 4964
LIVE MOMOTA : 44106
LIVE OKUNO : 954
LIVE FC : 3254
LIVE MOMOTA1 : 925576
LIVE MOMOTA2 : 113998714
LIVE MOMOTA3 : 100079206
LIVE OKUNO1 : 32989
LIVE OKUNO2 : 7234
LIVE OKUNO3 : 5406
LIVE_CLOCK : 1332385

```

A Helicopter Charge?  
RIN 1/2, 1/3  
LSNAC 100

RIPS Control Summary

2004/06/05 16:42:26

0.0000	125.630	125.579		
0.0000	100.318	99.197	194.6	50.1
0.0000	95.2328	95.366		
0.0000	0.1469	0.000	24.0	50.0
0.0000	298.682	300.754	24.0	
0.0000	0.1469	0.000	24.0	94.8
0.0000	51.6865	51.640	23.8	4.9
0.0000	64.7598	64.864		
0.0000	57.6620	57.918		
0.0000	0.1469	0.000		
0.0000	310.638	309.897	119.8	
0.0000	0.1469	0.000	-134.9	49.9
0.0000	79.7157	80.587	5.0	50.0
0.0000	83.2156	83.368	5.0	
0.0000	97.3057	97.283		
0.0000	111.855	113.458		
0.0000	122.795	121.335		
0.0000	111.815	113.236		
	1.9300		0	
1.9300	1.9300			

6-05 04 15:59 prisca

Run100

Start -- Sat Jun 5 15:30:30 2004

Stop -- Sat Jun 5 15:59:18 2004

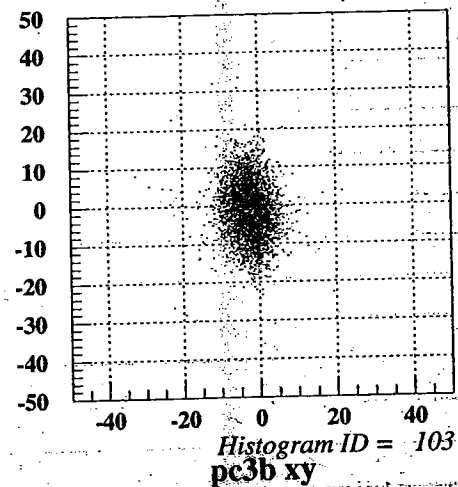
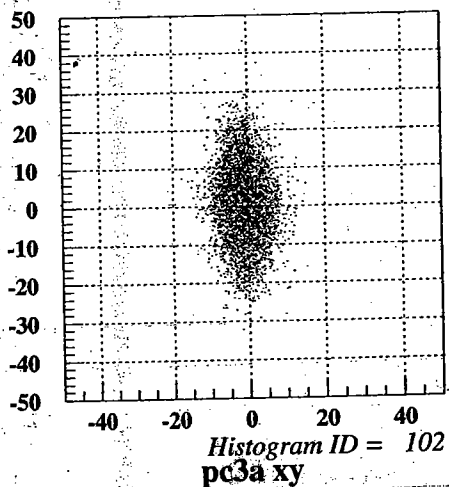
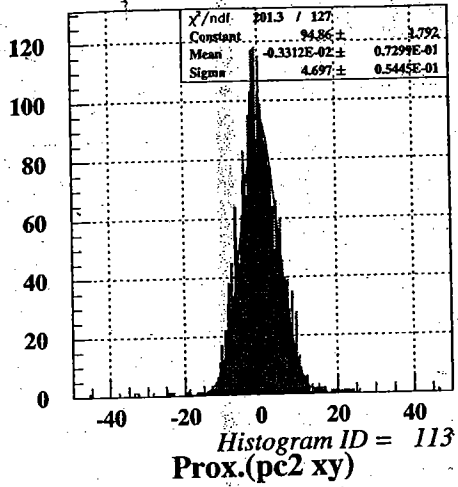
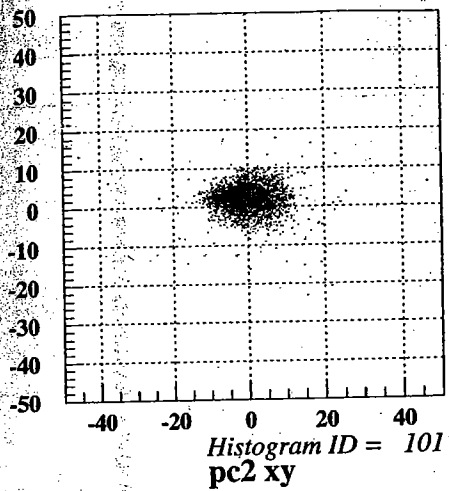
Scaler Name :	Total
UNGATED :	1097087
GATED :	857596
NONE :	14058
F1PP T :	50
F2 SI :	0
CLEARs :	857539
F2PP T :	1158166
F3PPA T :	1081159
E1 :	1052482
PL_2 :	1100058
PL_3 :	1105315
CLOCK :	1687921
TGT NAI :	3336609
TGT BAF :	6415
MOMOTA :	56622
OKUNO :	1250
FC :	4000
MOMOTA1 :	1175010
MOMOTA2 :	144531824
MOMOTA3 :	126826598
OKUNO1 :	42475
OKUNO2 :	9349
OKUNO3 :	6887
F3PPB T :	1072280
LIVE TGT NAI :	2598259
LIVE TGT BAF :	4964
LIVE MOMOTA :	44106
LIVE OKUNO :	954
LIVE FC :	3254
LIVE MOMOTA1 :	925576
LIVE MOMOTA2 :	113998714
LIVE MOMOTA3 :	100079206
LIVE OKUNO1 :	32989
LIVE OKUNO2 :	7234

A Henschel  
RIN6  
LINA

Run number:	101	Tape:	8	Name:	JMC
Description:	Bp 1.95, Be92, F2 PL trigger				
Date:	6/5	Time:	16:24		
Brho1:	1.95	Brho2:	1.95		
NMR1:	542.337	NMR2:	542.600		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	IS mm	F1PPAC:	IN OUT		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN OUT	F3PPACs:	IN OUT		
F2 Scint:	IN OUT	F3 Scint:	IN OUT		
Rips control	yes/no	prisca	SCA file 1001101		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

Bias voltage table (please compare to previous values)			
U dE-		I dE-	
U E1-		I E1-	
U E2-		I E2-	
U E3-		I E3-	
U E4-		I E4-	
F1_PPAC=		NaI(Tl)_1=	
F2_PPAC=		NaI(Tl)_2=	
F3_PPACA=		NaI(Tl)_3=	
F3_PPACB=		BaF=	

RIPS Control Summary				2004/06/05 17:00:07			
Parameter	Set	Curr.	Read	Target	F2		
Q1	1.3167	126.942	127.028	Tgt 194.6 mm	FC	Out	
Q2	1.5337	101.359	100.146	FC Out	Rgt	50.1	mm
Q3	0.7725	96.2211	96.579	Up 24.0 mm	Lft	50.0	mm
SX1	0.0000	0.1469	0.000	Dwn 24.0 mm	PPAC		
D1	0.2777	301.7841	304.193	Rgt 24.0 mm	SSD	-94.8	mm
SX2	0.0000	0.1469	0.026	Lft 23.8 mm	Deg	Out	
Q4	0.5572	52.2387	52.130	Lgt	Pla	-4.9	deg.
Q5	0.7942	65.4469	65.606			IN	
Q6	0.6197	58.2770	58.516				
SX3	0.0000	0.1469	0.000				
D2	0.2777	313.8011	312.806	F1	F3		
SX4	0.0000	0.1469	0.000	D1 119.8 mm	PPAC1	IN	
Q7	0.6468	80.5431	81.725	ld -134.9 mm	Rgt	49.9	mm
Q8	1.1259	84.0757	84.159	Rgt 5.0 mm	Lft	50.0	mm
Q9	1.0222	98.3245	98.317	Lft 5.0 mm	PPAC2	IN	
Q10	1.1110	113.016	114.459	Mon Out	SSD	Out	
Q11	1.4205	124.064	122.694	Deg Emp	Pla	IN	



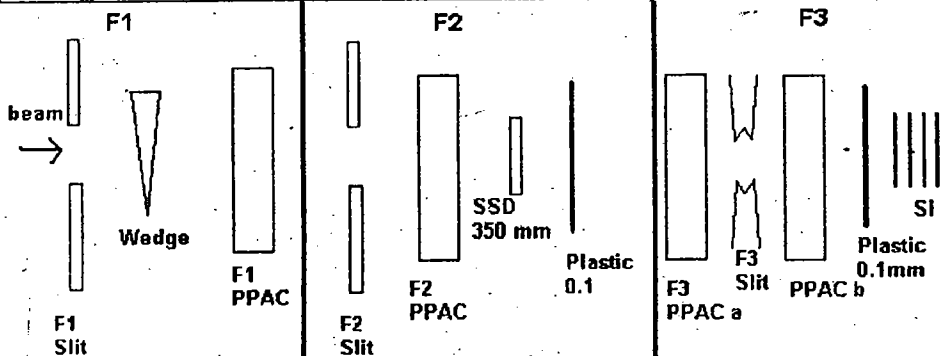
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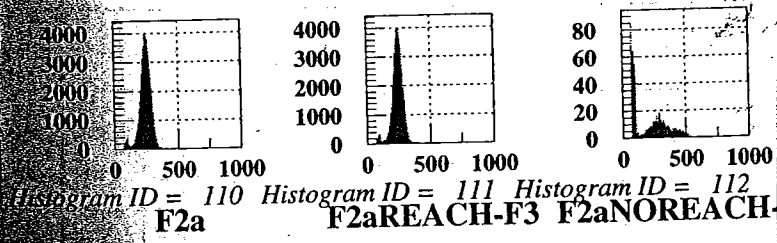
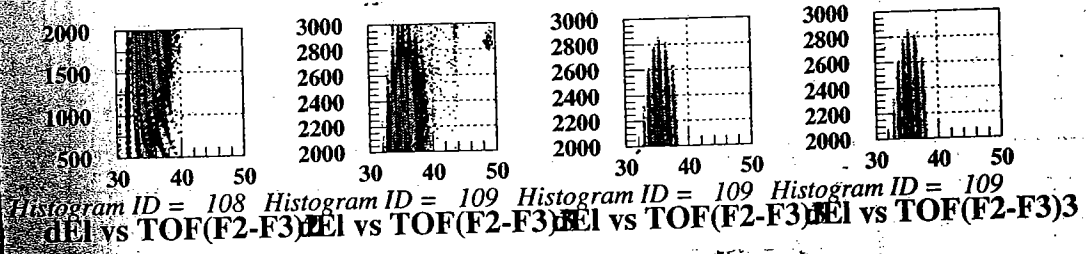
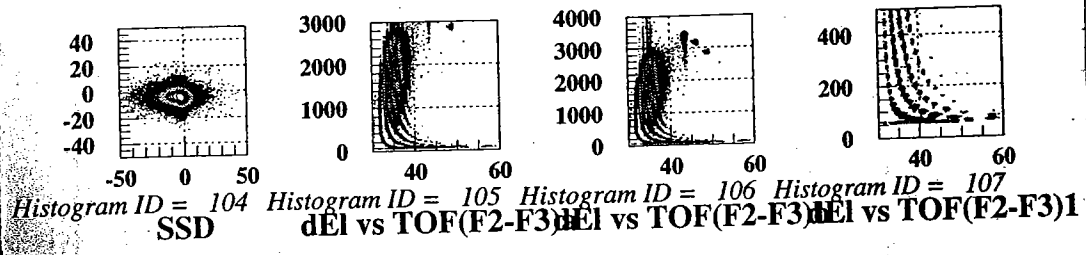
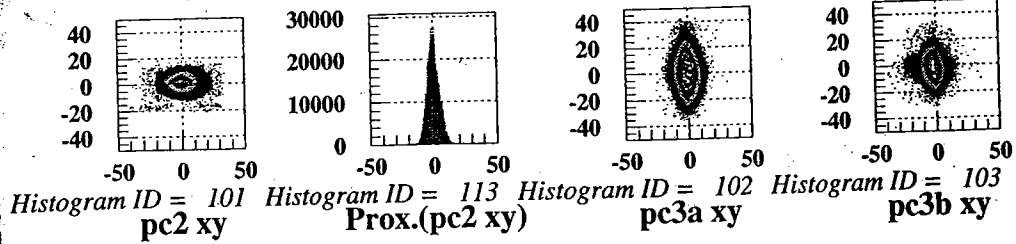
Run101
Start -- Sat Jun 5 16:24:59 2004
Stop  -- Sat Jun 5 16:55:11 2004

Scaler Name :      Total
UNGATED :      1661945
GATED :        1191379
NONE :          19528
F1PP T :         52
F2 SI :          0
CLEARS :      1191209
F2PP T :      1752192
F3PPA T :     1650479
E1 :           1604250
PL 2 :         1670040
PL 3 :         1681198
CLOCK :       1809697
TGT NAI :     3050554
TGT BAF :       5995
MOMOTA :      52721
OKUNO :       1096
FC :          4157
MOMOTA1 :    1243867
MOMOTA2 :    155197891
MOMOTA3 :    136136524
OKUNO1 :      40308
OKUNO2 :      8555
OKUNO3 :      6265
F3PPB T :    1642988
LIVE TGT NAI : 2172381
LIVE TGT BAF :  4335
LIVE MOMOTA :  37602
LIVE OKUNO :   781
LIVE FC :     3107
LIVE MOMOTA1 : 903368
LIVE MOMOTA2 : 112689648
LIVE MOMOTA3 : 98926272
LIVE OKUNO1 :  28810
LIVE OKUNO2 :   6007
  
```

Run number:	102	Tape:	8	Name:	JHC
Description:					
Date:	5/6/15	Time:			
Brho1:	1.95	Brho2:	1.95		
NMR1:	542.332	NMR2:	542.600		
Target:	Be(92)	Ta(166)	Be(115) Be(181)		
F1 slit:	±5 mm	F1PPAC:	IN OUT		
Wedge:	none	100mg/Al	60mg/Al		
F2 slit:	open				
F2PPAC:	IN OUT	F3PPACs:	IN OUT		
F2 Scint:	IN OUT	F3 Scint:	IN OUT		
Rips control	yes/no	prisca	SCA file: 10002.k		
Trigger:	F1 PPAC/F1Plastic/F2 Plastic				

U dE=	95.5V	I dE=	0.72uA
U E1=	95.8	I E1=	0.54
U E2=	75.5	I E2=	0.26
U E3=	75.3	I E3=	0.21
U E4=	95.4	I E4=	0.14
F1_PPAC=	-748	NaI(Tl)_1=	0.60
F2_PPAC=	-951	NaI(Tl)_2=	
F3_PPACA=	-755	NaI(Tl)_3=	
F3_PPACB=	-755	BaF=	1351.8





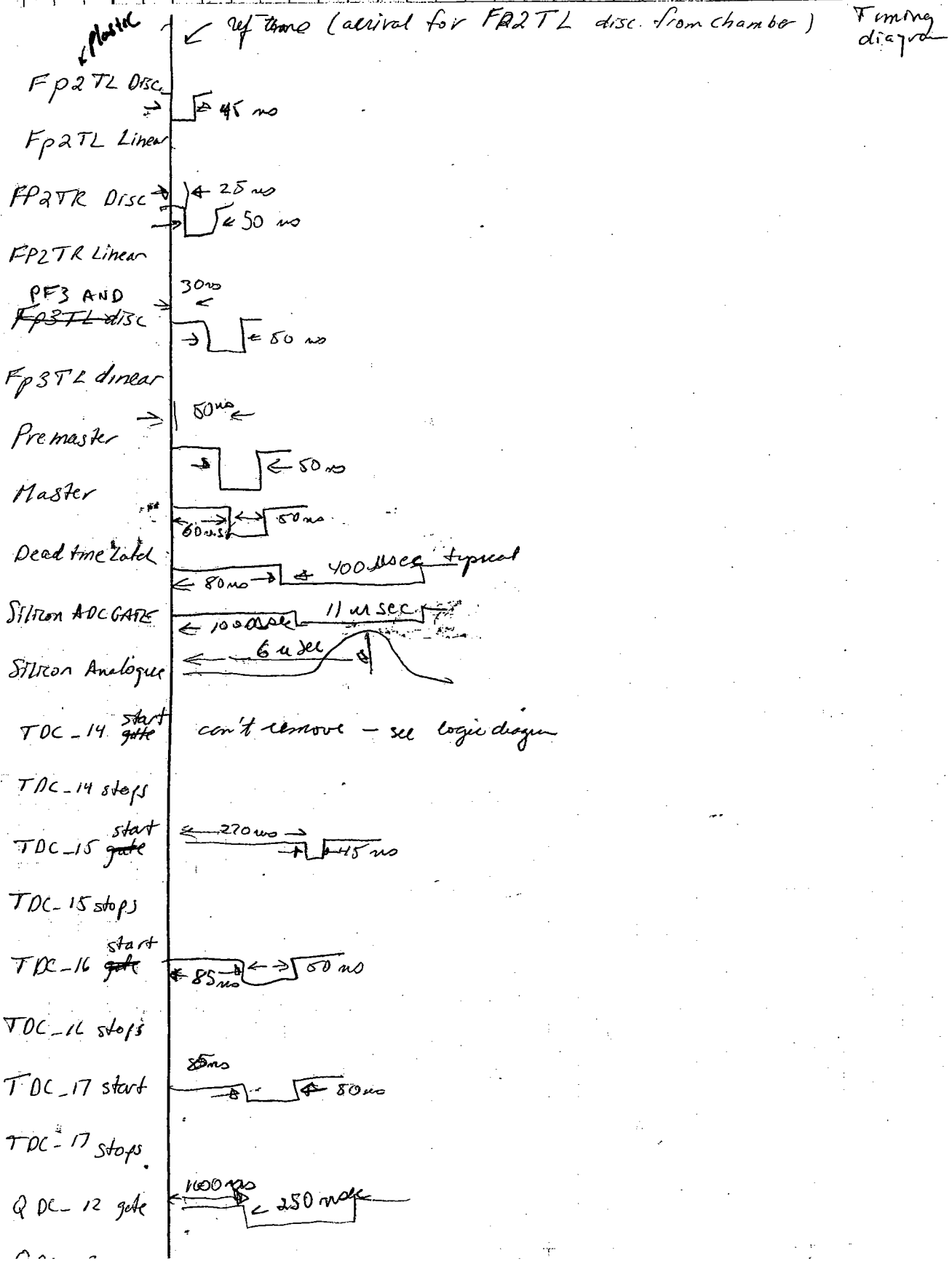
pictures during Run 101  
 $\Phi 1 = 542.336$   
 $\Phi 2 = 542.576$

6/05/04 17:30 prisca

Run102

Start -- Sat Jun 5 17:00:53 2004  
 Stop -- Sat Jun 5 17:30:33 2004

Scaler Name :	Total
UNGATED :	761697
GATED :	646372
NONE :	10596
F1PP T :	71
F2 SI :	0
CLEARs :	646357
F2PP T :	731584
F3PPA T :	699489
E1 :	700804
PL 2 :	730089
PL 3 :	733576
CLOCK :	1777797
TGT NAI :	2821236
TGT BAF :	5164
MOMTA :	100863
OKUNO :	8930
FC :	3941
MOMTAL :	1301257
MOMOTA2 :	152696410
MOMOTA3 :	134208219
OKUNO1 :	154003
OKUNO2 :	37326
OKUNO3 :	19119
F3PPB T :	672389
LIVE TGT NAI :	2384164
LIVE TGT BAF :	4357
LIVE MOMTA :	85192
LIVE OKUNO :	7540
LIVE FC :	3416
LIVE MOMTAL :	1105270
LIVE MOMOTA2 :	129801197
LIVE MOMOTA3 :	114118994
LIVE OKUNO1 :	130217
LIVE OKUNO2 :	31598
LIVE OKUNO3 :	16171
LIVE CLOCK :	1512289





reference time for FP2TL disc right from vault

QDC-13 gate

100ns 170ns

QDC-13 signal

Bit-gate

100ns 13  $\mu$ sec

Bits

1  $\mu$ sec 12  $\mu$ sec

Scaler inhibit

80  $\mu$ sec 400  $\mu$ sec typical

Scalers in slot 3

clears