

Bob Charity

Lee Sobotka

Sergey Komarov

Andy Rogers

Bill Lynch

Betty Tsing

Mark Wallace

Jenny Lee

D.Y. PANG.

Alisher

Sylvie Aidan

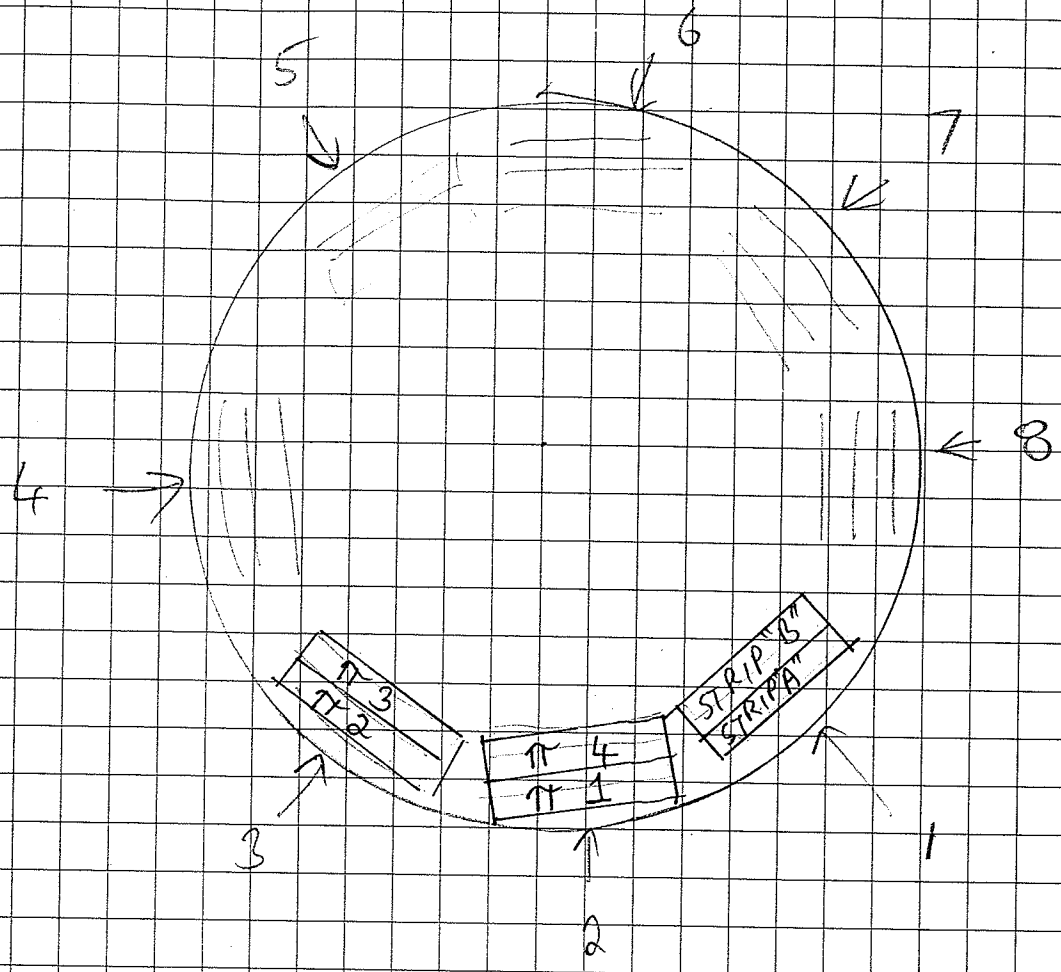
Carl Motell

Marc Jan

Sergiy

Sergey

Top of preamp Tower

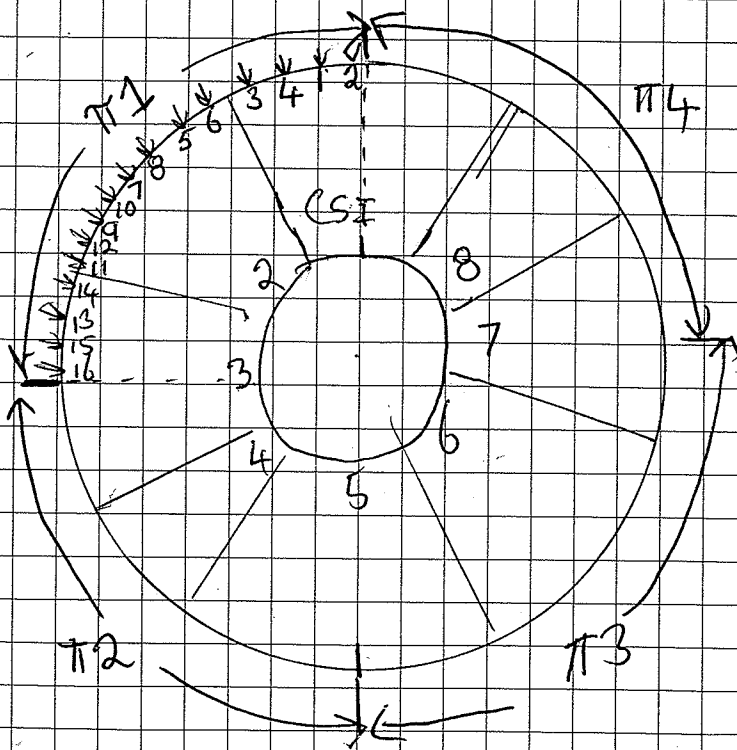
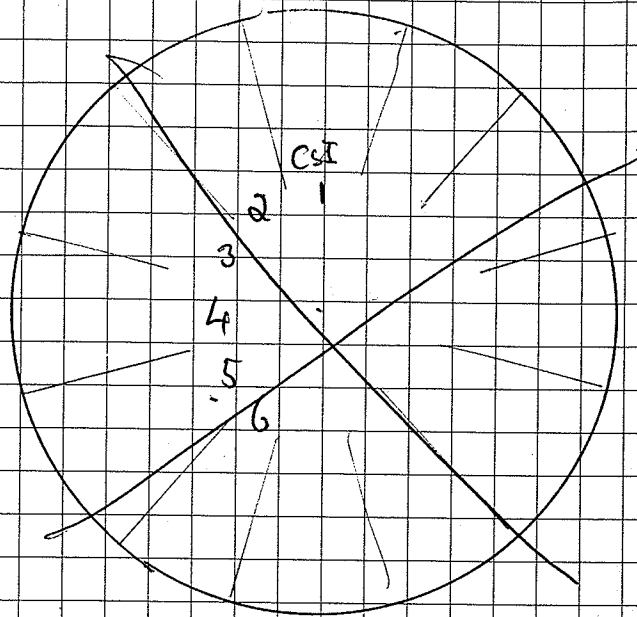


shapers

- 1 π1
- 2 π2
- 3 π3
- 4 π3
- 5 A STRIPS A
- 6 B STRIPS B

gain = 225
 threshold = 130 - 150

look downstream



strip "A"
strip "B"

inner
outer.

Si Ring Counter problems

π 1-7

intermittent - sometimes looks as if breaking down

π 3-12

missing

3-13

tail

π 4-8

noise generated by bias

9

"

11

"

STRIP 5-4

noisy

5

"

6

"

5-13

missing

6-11

missing

6-9

"

6-13

"

bias

Ring Si

+40 V

applied on strips ~2 μ A

CST

+40 V

9-23-05

Lassa Si Boxes

missing
channel
B04

1	1674-12	482 μ m	45V	0.15 \rightarrow 0.35 μ A	B04
2	1140-21	468 μ m	75V	0.7 \rightarrow 0.8 μ A	B07
3	1148-17	476 μ m	48V	1.5 \rightarrow 1.7 μ A	
4	1140-19	481 μ m	55V	1.05 \rightarrow 1.7 μ A	

1148-17
48V 1.05 \sim 1.7 μ A

1140-19
Strip B07 - missing

55V 1.05 \sim 1.7 μ A

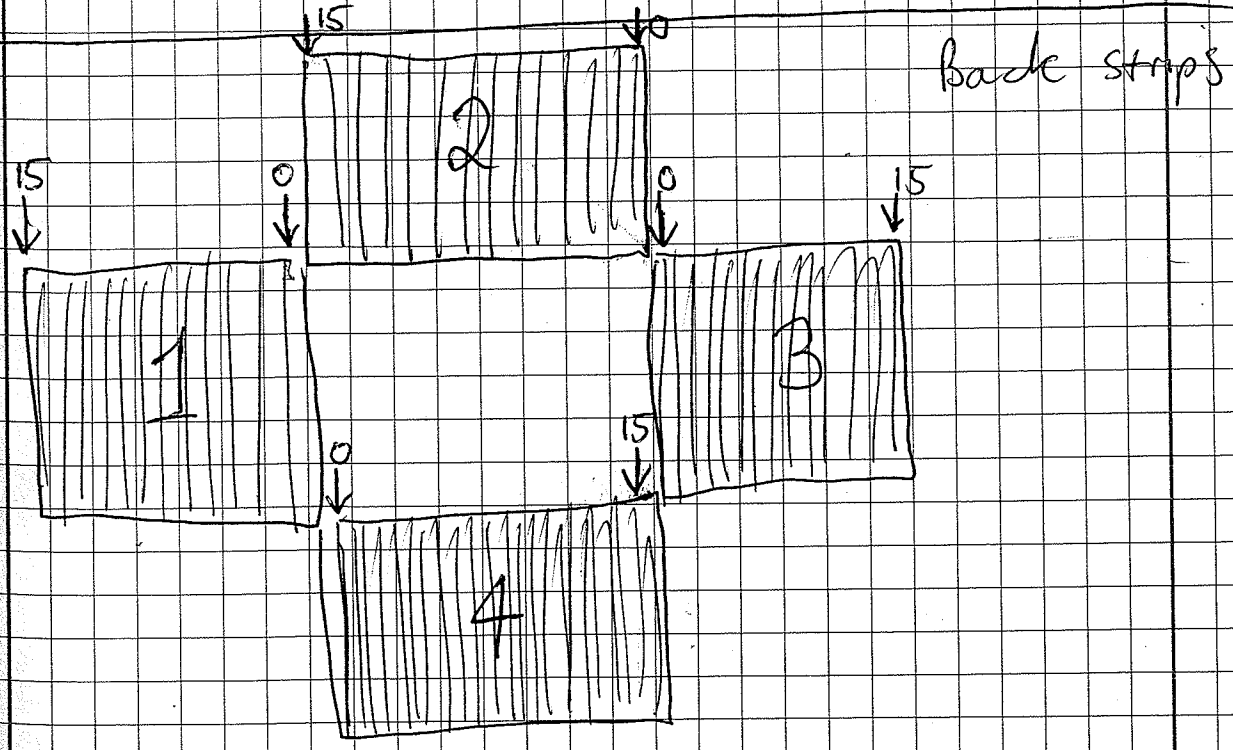
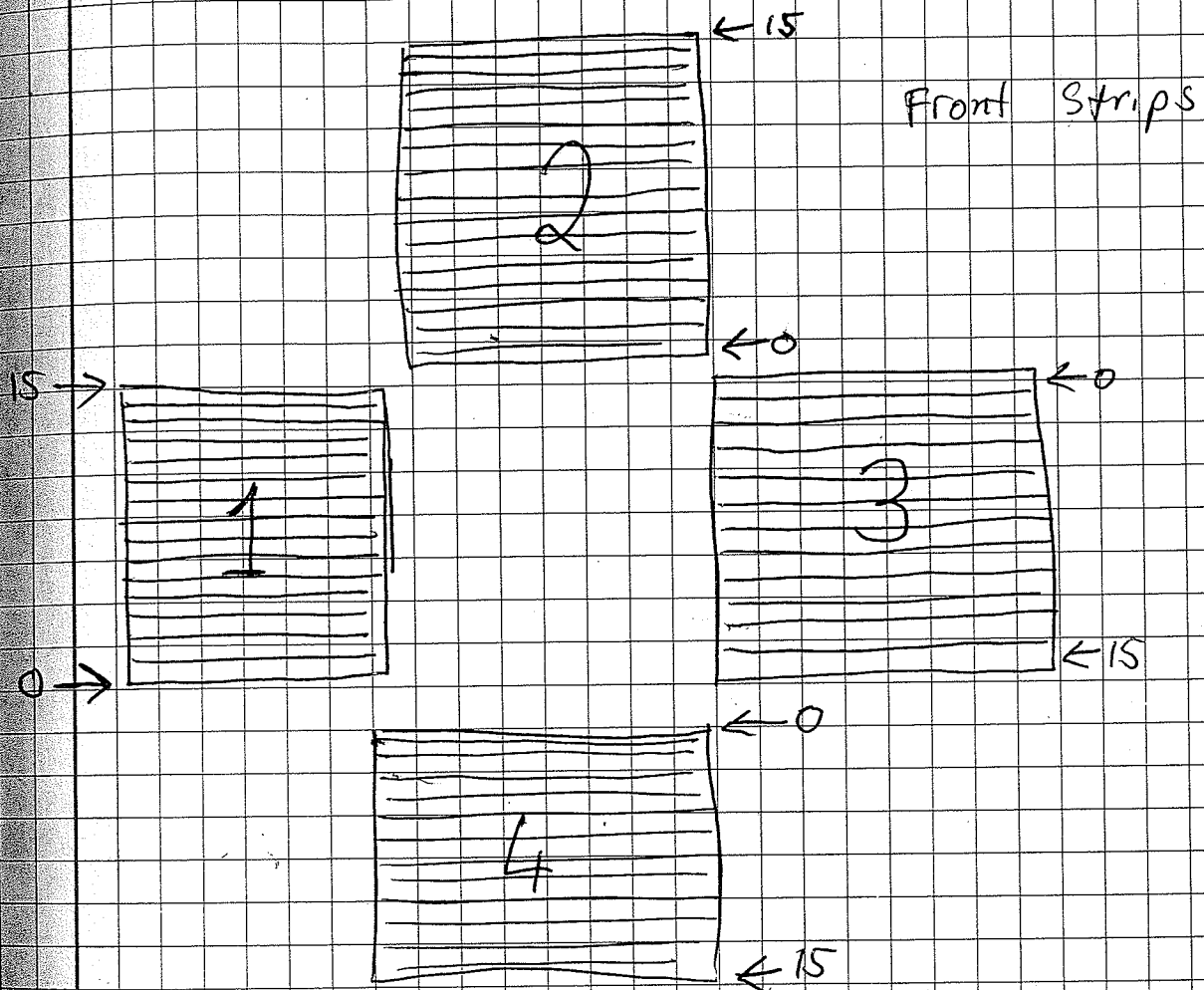
1140-21
75V 0.7 \sim 0.8 μ A

1674-12
B04
45V 0.15 \sim 0.35 μ A

Lassa arrangement

Look down stream

mess
class
B04
B07



BNC Fange

ISI 1
2
3
4 } Lassa 1

ISI 1
2
3
4 } Lassa 2

ISI 1
2
3
4 } Lassa 3

ISI 1
2
3
4 } Lassa 4

~~Test 1~~

~~Test 2~~

Test 3

Test 4

bas 1

bas 2,3,4

~~Lassa~~

Lassa 2

Lassa a
CSI

2	4
1	3

Lassa 1

1	2
3	4

+

Lassa 3

1	2
3	4

3	1
4	2

Lassa 4

Looking Down stream

Lassa 2 front 15 stray signal

Lassa 2 Back 4 } large gain strange shape
5 } due to saturation

Lassa 3 Back 0-15 saturation

Lassa 4 Back 0-15 just strange shape.

Lassa 2 Back 1+2

Lassa 2 Front

B 3-13 low gain

F 2-11 low gain

Si currents

			should be
3	-48V	2.79 μ A	1.5 @ 1.7 1.5 @ 1.7
2	-75	2.43 μ A	0.7 @ 0.8 μ A
1	-45	0.60 μ A	0.15 @ 0.35 μ A
4	-55	3.63 μ A	1.5 @ 1.7 μ A

Larger than expected.

Bias off

Lassa	3	Si channel	Front	all there
	4		Front	ϕ missing
	1		Front	13-15
	2		Front	ϕ ; 9, 10, 15
	1	Back	missing	ϕ , 12
	2			all there
	3			13 (13-15) low gain
	4			ϕ , 9

Bias ON

Bias current

1	Front	all there	0.71
2		9, 10	3.09
3		all there	3.27
4		ϕ ,	3.99
1	Back	ϕ , 12	
2		all there	
3		all there	
4		ϕ , 9	

Lassa 1

Front

Triggering at nose Disk not set.

back

no chan. 12

Lassa 2

Front

ch. 9 ⊖

ch 10 no shaper

Lassa 3

Front

ch 0 - trig. noise

back

chan 13 low gain
(fracturing)

Lassa 4

~~ch 0~~ trig. noise all channels.

back

all chan low gain
9 - no signal

Lassa 2 no ch 9, 10

ch 7 low gain

ch 0 low gain

Lassa 4

back

ch 9 - very small signal
0 - no signal

Lassa 3

back

ch 13 - small signal

Lassa 1

back

ch 12 - ⊖

Lassa 4 ~~Front~~ ~~Back~~ ~~all~~ ~~ch~~ at max gain

Lassa 1	Front no 15	Back 12 ⊖
Lassa 2	Front no 9, 15	Back all
Lassa 3	Front all	Back 13 - low (very)
Lassa 4	Front all	Back 0 - ⊖, 9 - ⊖

Documents + settings / ^{Target} all users / ^{Drives} start menu.
Programs / NCS / An et MDI

X = up stream target ladder
Y = real Target Ladder.

Target Si (Y) = 228 mm
is 86/1000" ~ 2 mm
Scintillator = 172 mm

¹ Gold target measurement!
weight 5.49 gram of plate 10 x 10
 $d = 5.49g / 10 \times 10.5 = 52 \text{ mg/cm}^2$
We put X2 = 104 mg/cm²

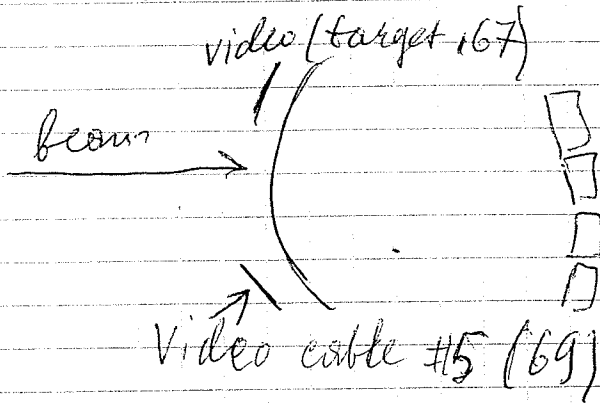
Video - cameras:

power supply

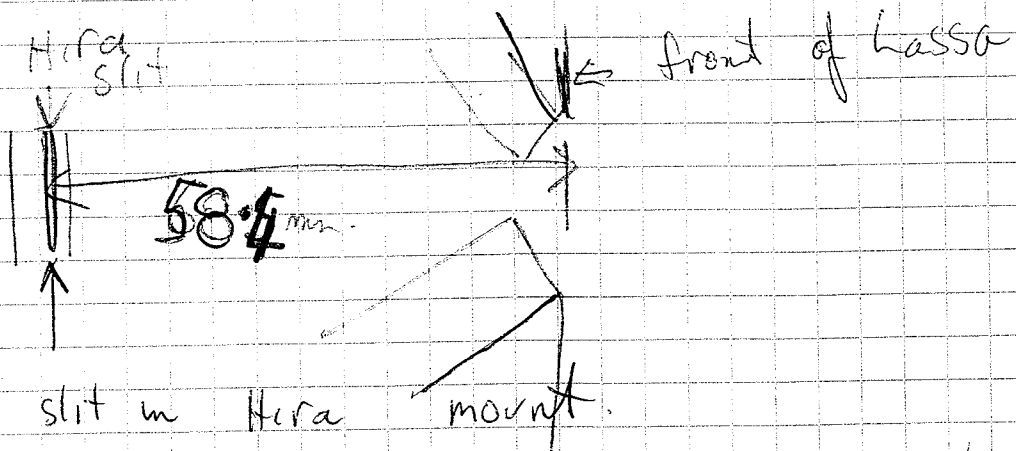
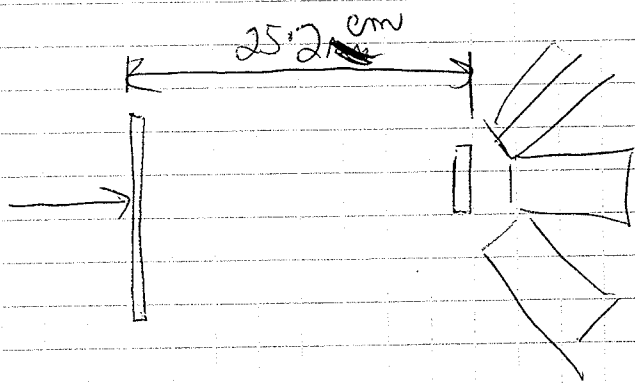
S800RIV. mtz / page 43

monitor #1

VideoMx Test / page 60

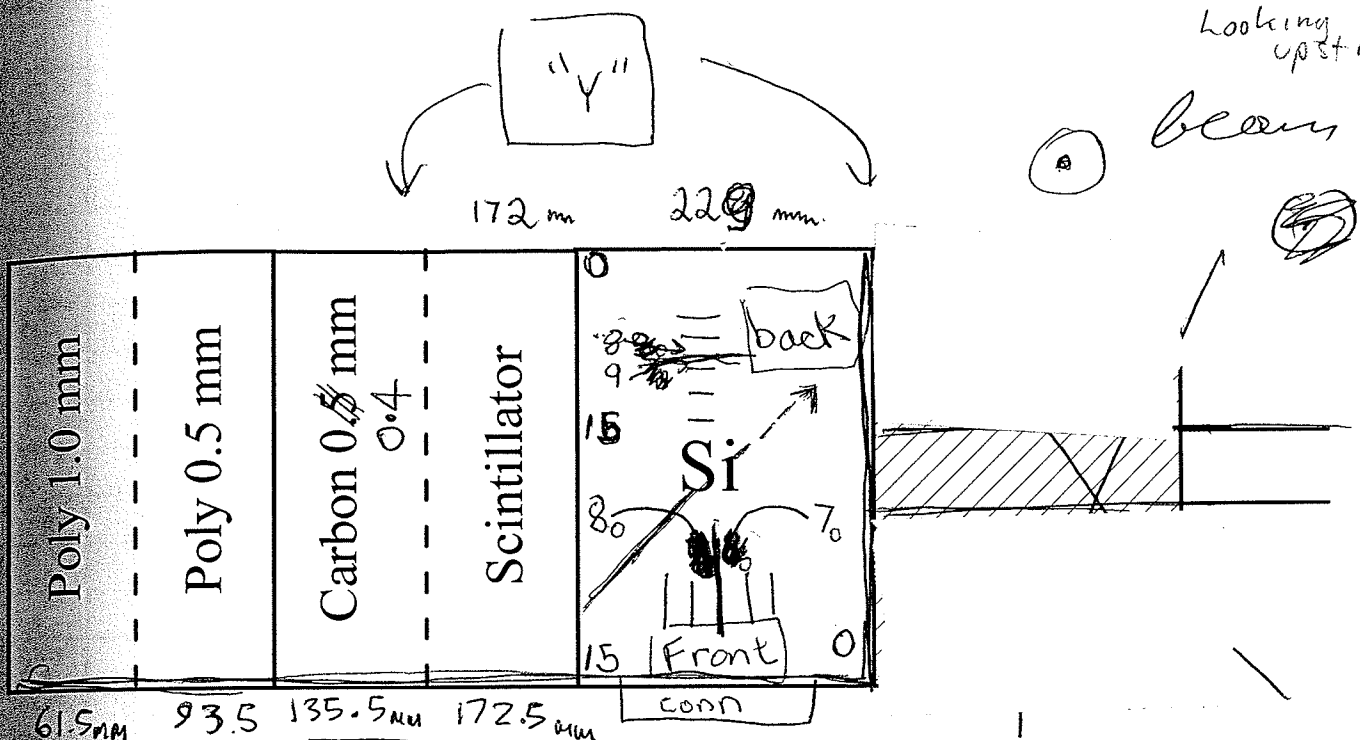


distance between 2 targets



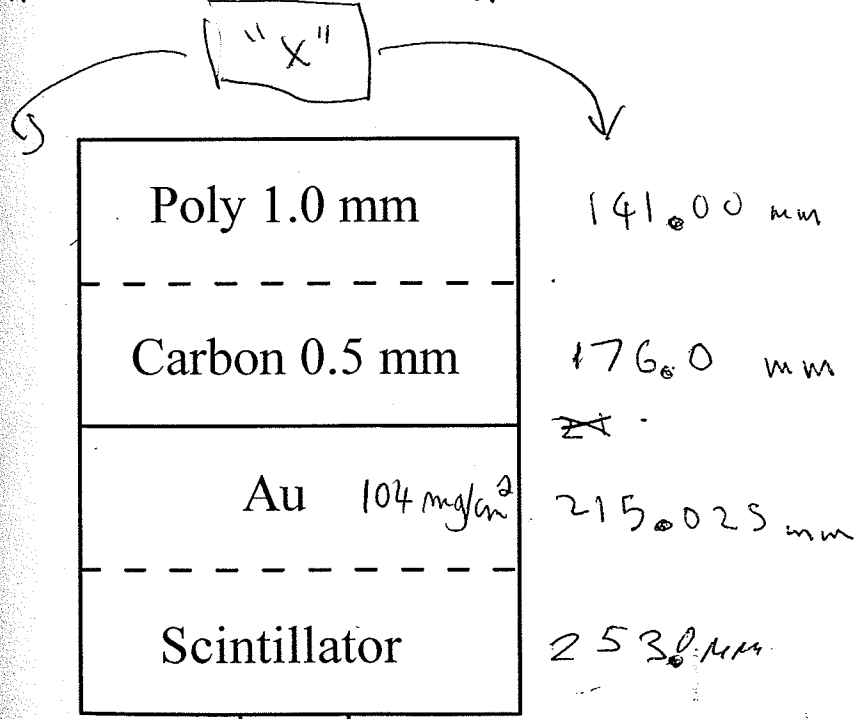
slit to target distance = $58.5 + 2.92$
~~61.4~~
 = 61.4 cm

Target Ladders



Looking up stream

beam



Am source (⊙) 300 mm.

(+) beam

Nominal ⁿ 50 cm distance
of HTRA from target is to ΔE

Cables to S900

105

106

107

108

109

110

Sc1 time

Sc2 time

Sc3 time

Sc4 time

CsI time

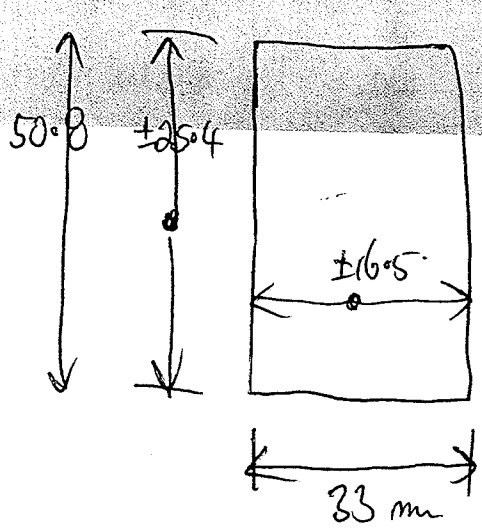
CsI mult \rightarrow secondary
Si \rightarrow S900

Beam size @ collimator

```

X si
Input or HELP<CR> COLL
*DRIFT*      z = 20.459 m      COLL
*SIGMA*
Zentren :      0.000 cm      0.000 mrad      0.000 cm      0.000
horz. Par. :   1.938 cm 25.4 23.554 mrad      -0.991      105.8 c
vert. Par. :   1.377 cm      19.356 mrad      -0.974      249.4 c
*TRANSFORM 1*
horz:
-5.28902      0.03108      0.00000      vert:
33.93524      -0.38847      0.00005      -2.42831      -0.04297
                                           53.62703      0.53710
Input or HELP<CR> █
    
```

± 16.5 33
13.7



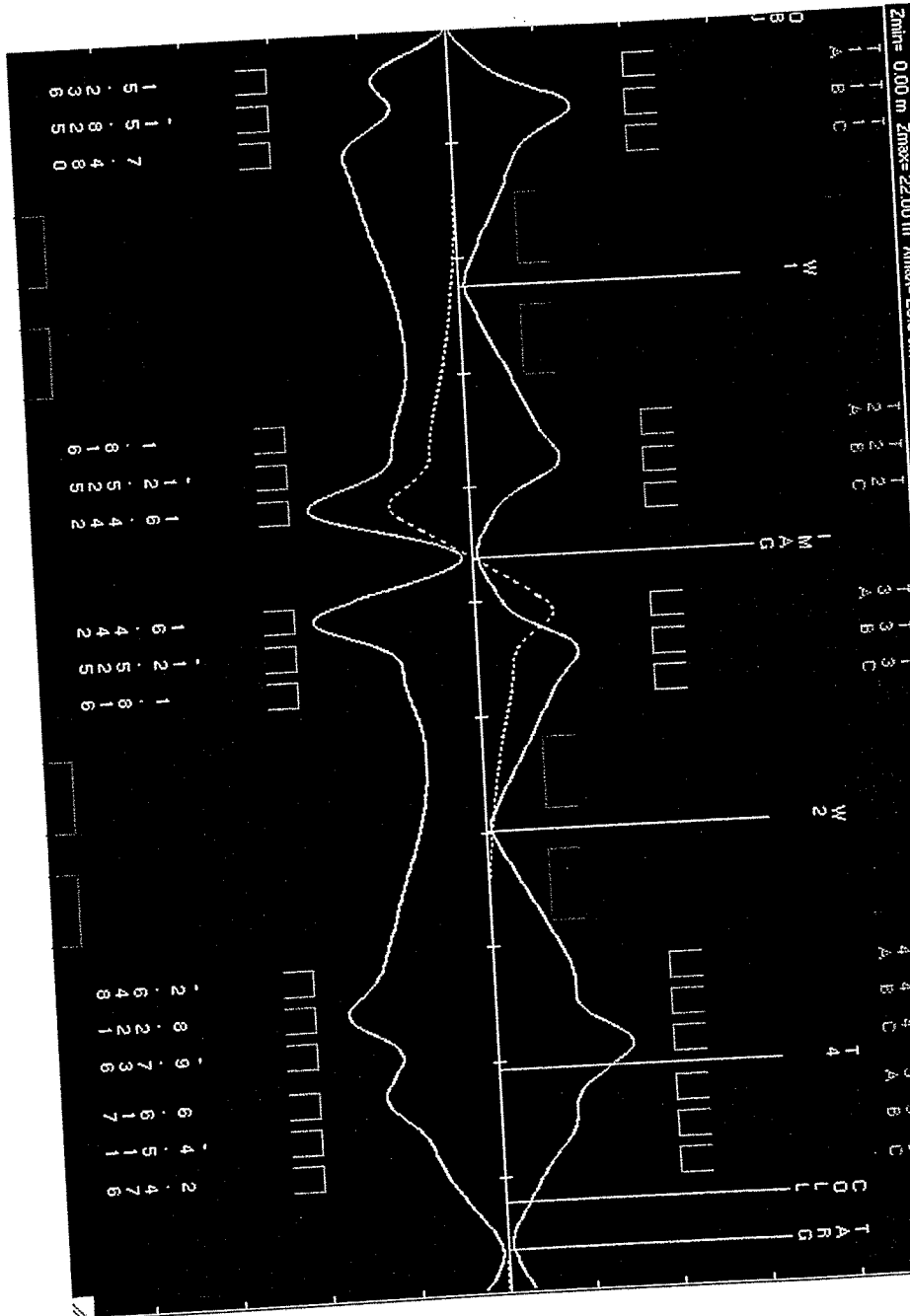
Blocker Hole

19.05

L: Lasercopy, <CR>: Exit

TRANSPORT

9800 High ACCEPTANCE RMB BAZIM mode: zero dispersion, Image optics, HIFA target 1
Zmin= 0.00 m Zmax= 22.00 m Xmax= 25.0 cm Ymax= 25.0 cm Ap * 1.00 30-Sep-05 13:51:14



USER / 02019 / Current / Others / PICO / input-files
 ↑ shaper + discriminator files 02019.

3 Back 13 small } swapped Pre Amp.
 2 Front ϕ

Target front 9 variable

3 Back 13 small

4-15 linear
 2-0 very noisy - take out PA.
 2 has large gain

scalers. in down VME

0	Lassa	Si	1	OR
1	"	"	2	
2	"	"	3	
3	"	"	4	

4	Lassa	CSI	1	OR
5	"	"	2	
6	"	"	3	
8	"	"	4	

9	T ϕ	Si		OR
10	T1	"		"
11	T2	"		"
12	T3	"		"

13	T0	CSI		OR
14	T1			OR
15	T2			OR
16	T2	CSI		OR

Lassa & front noisy

Lassa & back ϕ has returned
~~1~~ cs missing

Target det

Front 0 & 9 (winning (9 reappeared))

Back all present

Lassa CSI ADC

0-15 ϕ unused
 1-8 are CSI 1+2

~~16-31~~ 16 unused
 17-24 are CSI 3+4

Run 11 Th in Hira

9:30 out 1st.

RUN 12 10/2/05 10:42 PM start

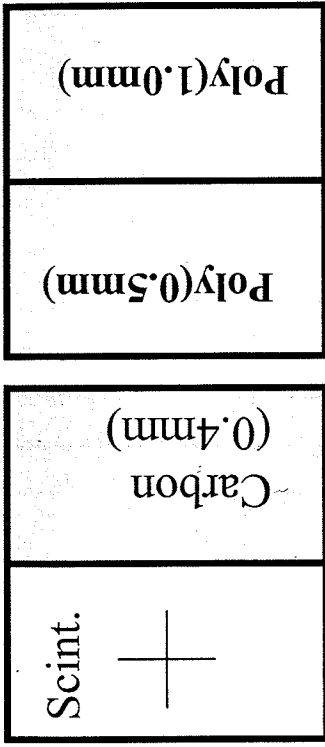
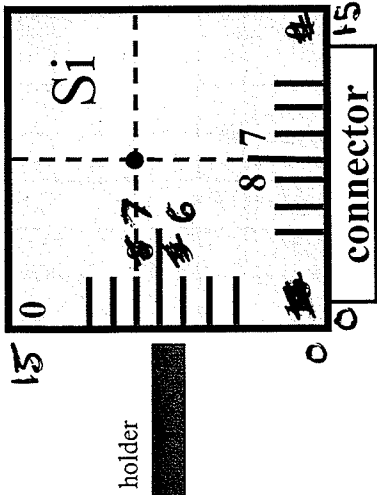
HIRA 232th calibration.

Chip setup file: 02019_Exp_2_sky

I251 YR

viewed by camera #67

02019
10/2/05

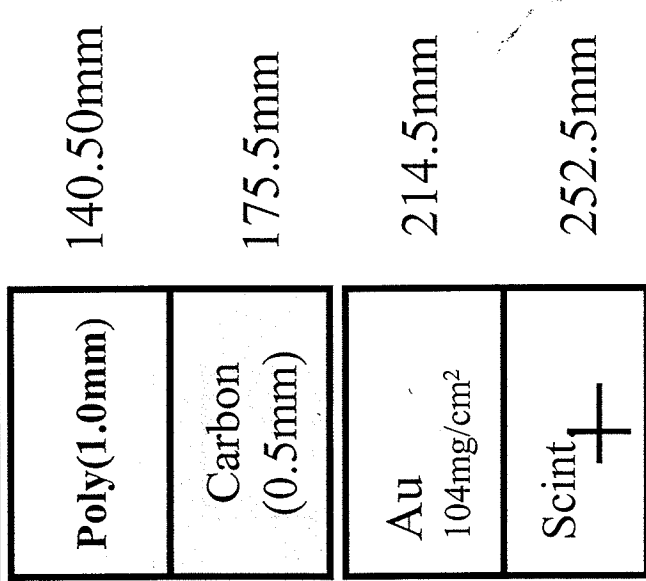


beam

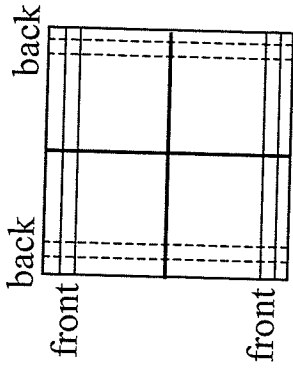
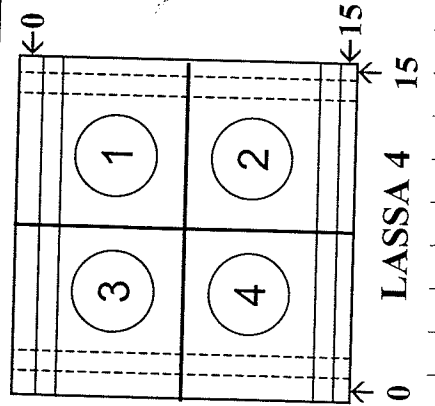
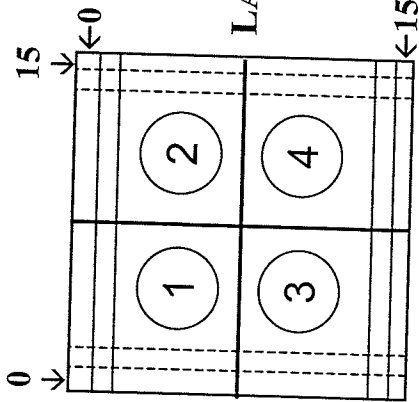
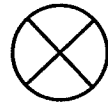
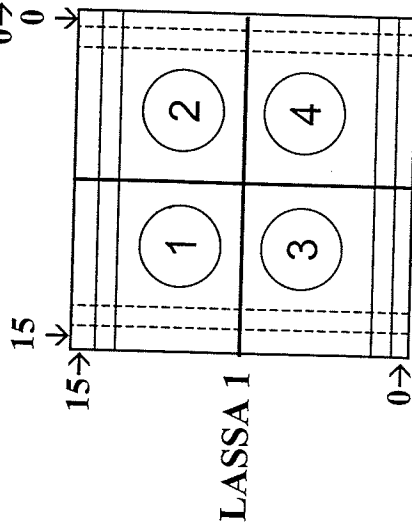
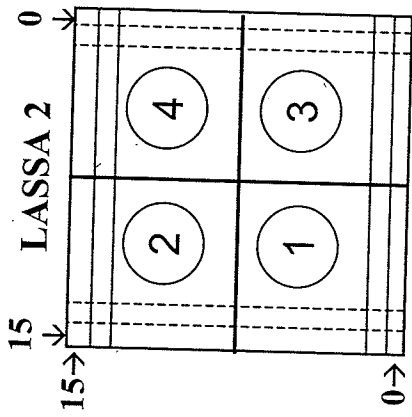
Position: 227.5mm 171.0mm 134.0mm 92.0mm 60.0mm

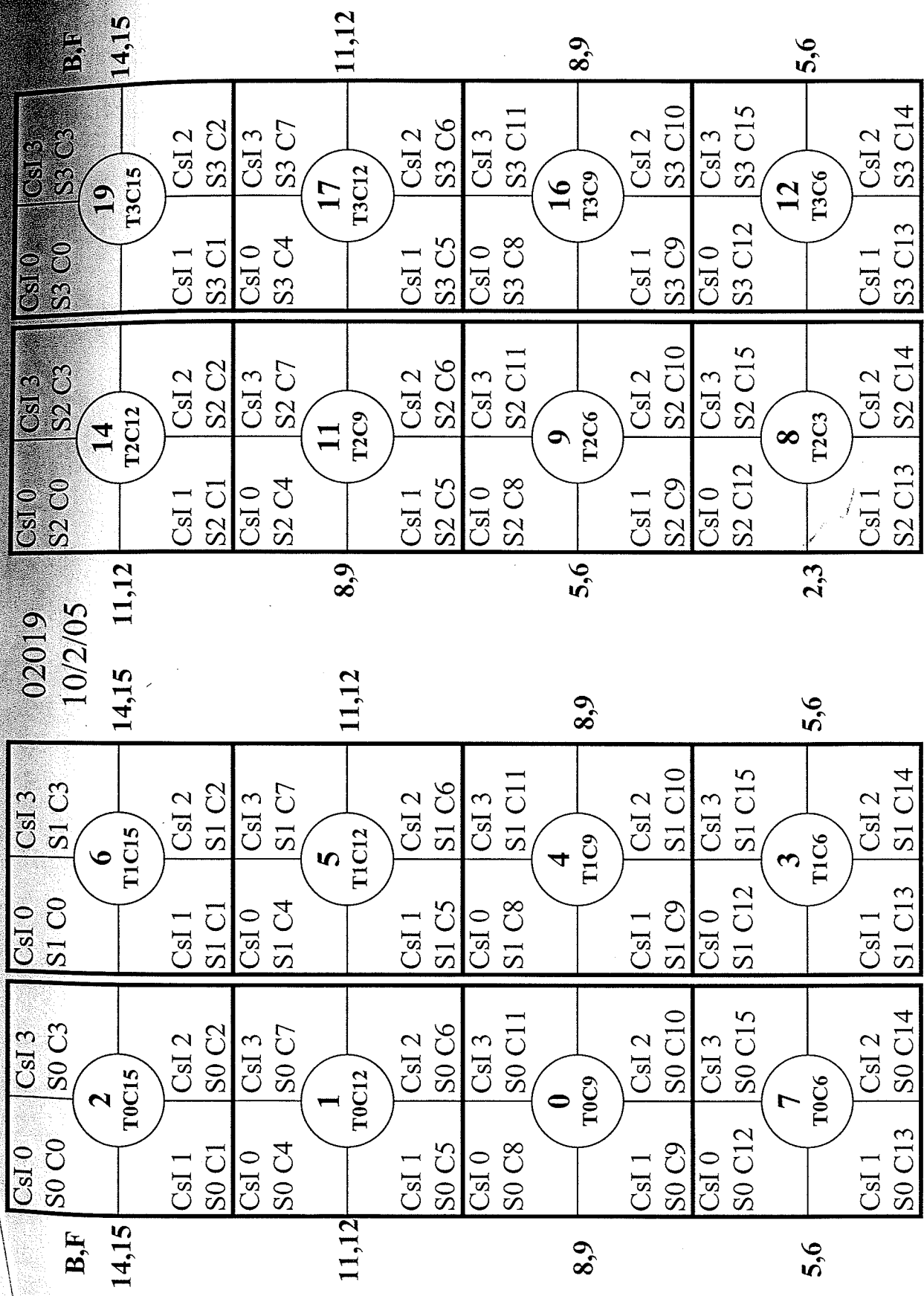
I250 XR

viewed by
camera #69



Source ● 299.5mm





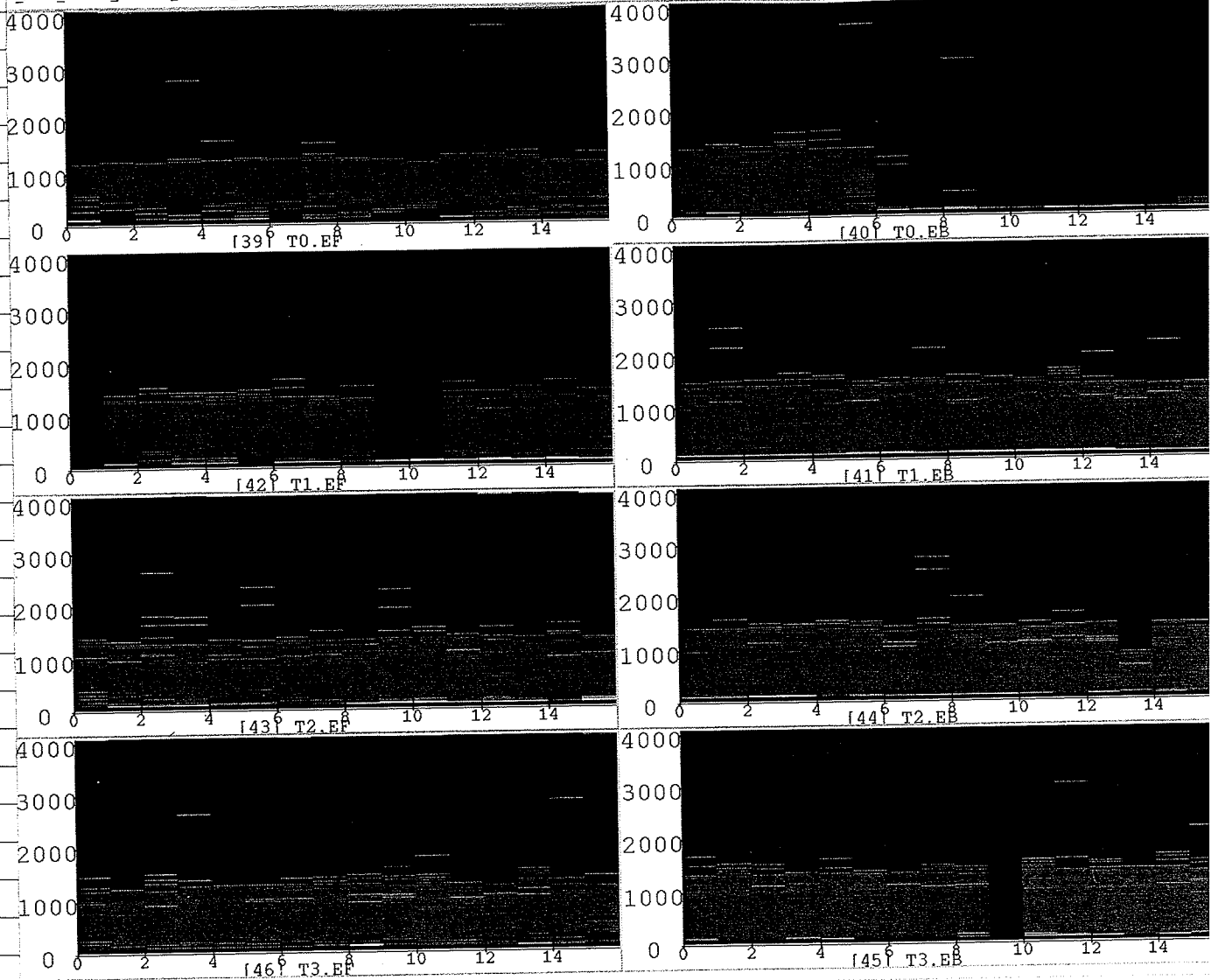
TOWER 0

TOWER 1

TOWER 2

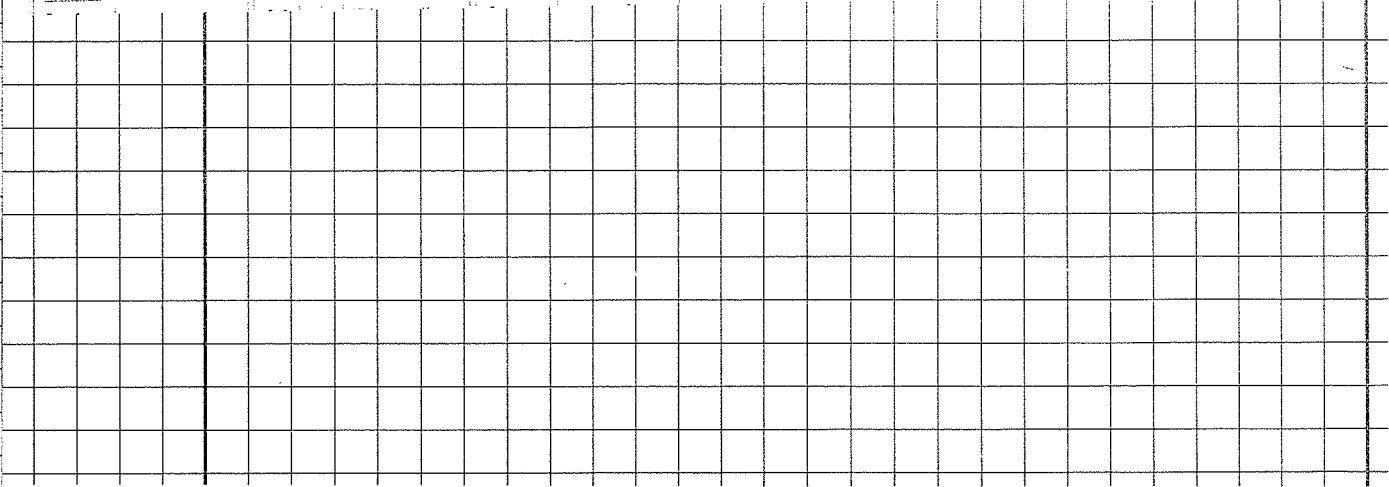
TOWER 3

Zamir - [Mscifire]
File Window Spectra Options Graph Objects Help

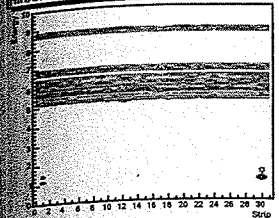


Spectrum 41 X 0 Y 395 Counts 0

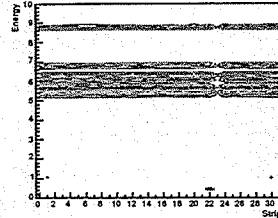
Geometry / Zoom Update All Expand Marker Cut
Display Update Selected UnExpand Summing Region Band



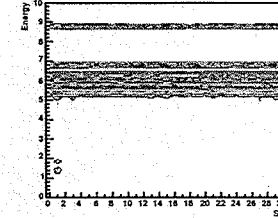
HIRA.TELE.00.EB.ECAL.SUMMARY



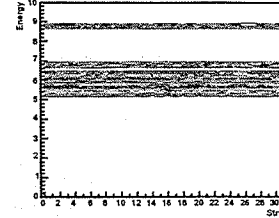
HIRA.TELE.01.EB.ECAL.SUMMARY



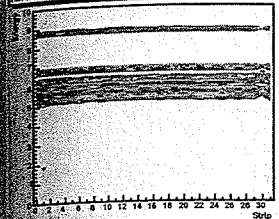
HIRA.TELE.02.EB.ECAL.SUMMARY



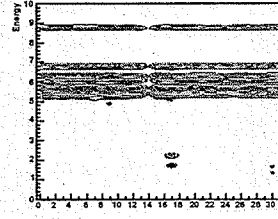
HIRA.TELE.03.EB.ECAL.SUMMARY



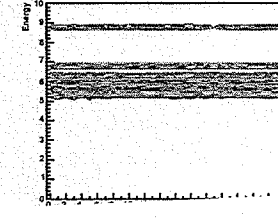
HIRA.TELE.04.EB.ECAL.SUMMARY



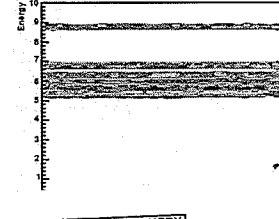
HIRA.TELE.05.EB.ECAL.SUMMARY



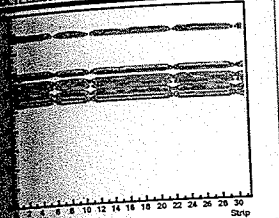
HIRA.TELE.06.EB.ECAL.SUMMARY



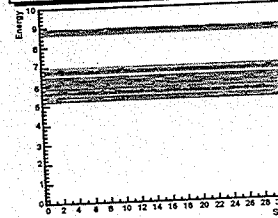
HIRA.TELE.07.EB.ECAL.SUMMARY



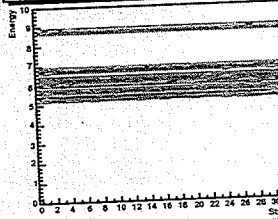
HIRA.TELE.00.EF.ECAL.SUMMARY



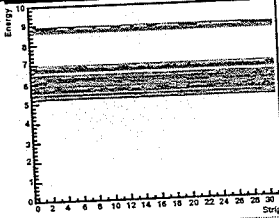
HIRA.TELE.01.EF.ECAL.SUMMARY



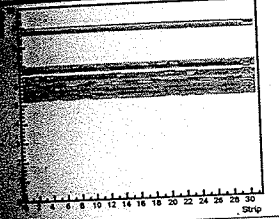
HIRA.TELE.02.EF.ECAL.SUMMARY



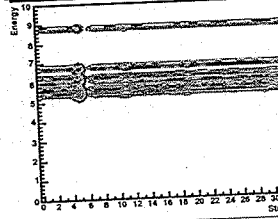
HIRA.TELE.03.EF.ECAL.SUMMARY



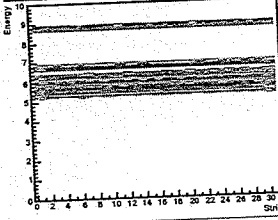
HIRA.TELE.04.EF.ECAL.SUMMARY



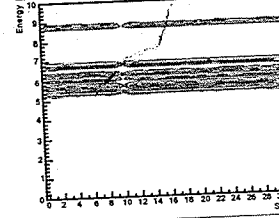
HIRA.TELE.05.EF.ECAL.SUMMARY



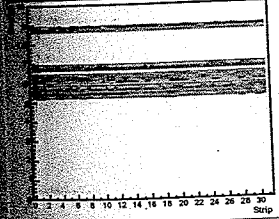
HIRA.TELE.06.EF.ECAL.SUMMARY



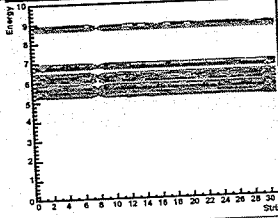
HIRA.TELE.07.EF.ECAL.SUMMARY



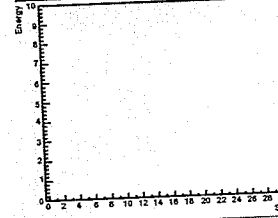
HIRA.TELE.08.EF.ECAL.SUMMARY



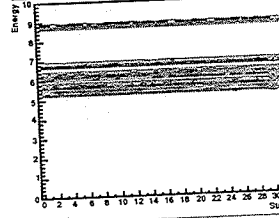
HIRA.TELE.09.EF.ECAL.SUMMARY



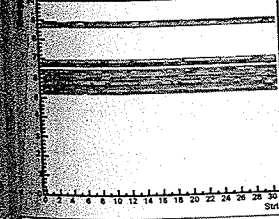
HIRA.TELE.10.EF.ECAL.SUMMARY



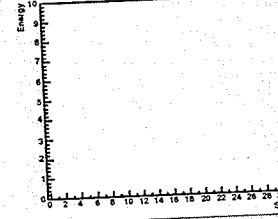
HIRA.TELE.11.EF.ECAL.SUMMARY



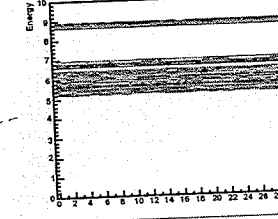
HIRA.TELE.12.EF.ECAL.SUMMARY



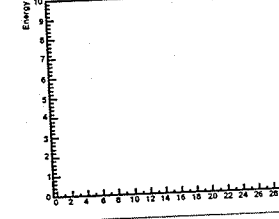
HIRA.TELE.13.EF.ECAL.SUMMARY



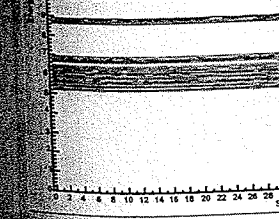
HIRA.TELE.14.EF.ECAL.SUMMARY



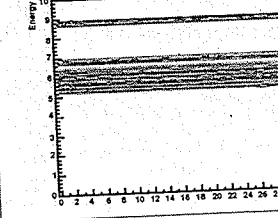
HIRA.TELE.15.EF.ECAL.SUMMARY



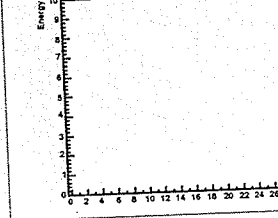
HIRA.TELE.16.EF.ECAL.SUMMARY



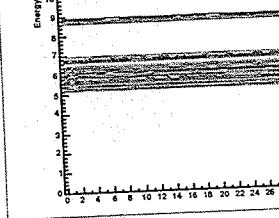
HIRA.TELE.17.EF.ECAL.SUMMARY



HIRA.TELE.18.EF.ECAL.SUMMARY



HIRA.TELE.19.EF.ECAL.SUMMARY



35.9.56.160

COEN HV

pot 1527

target location

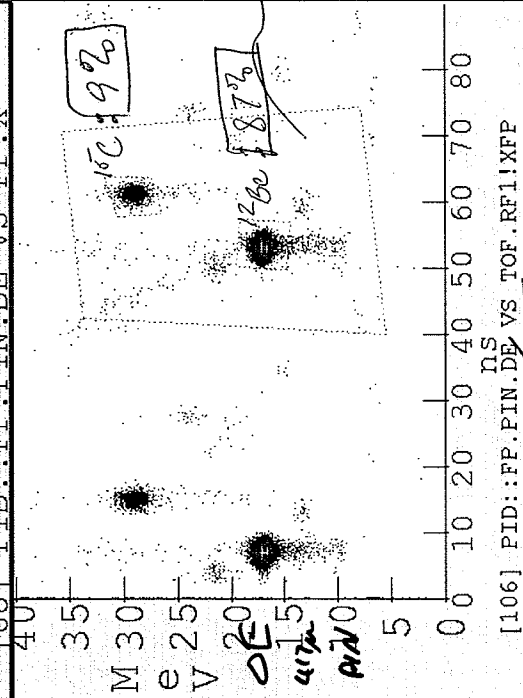
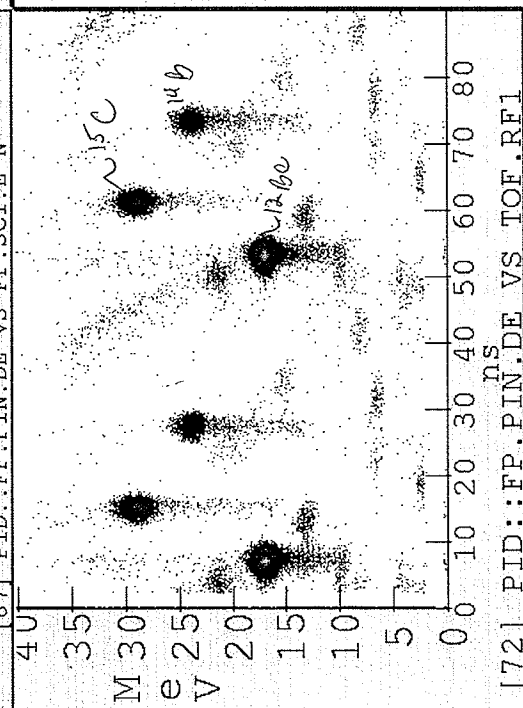
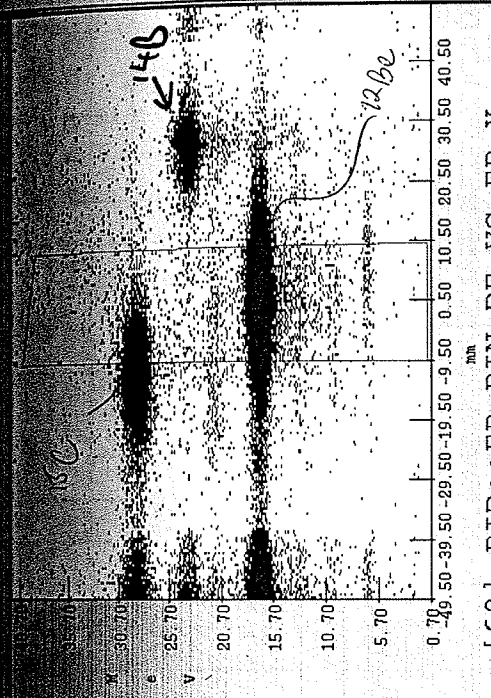
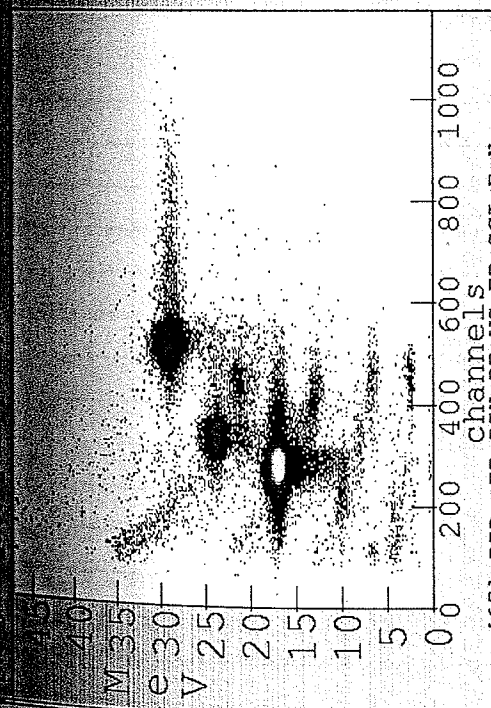
Vert = 8.72 PW Am = 4.8

Horizontal = 8.00

2.7

strips are 3mm

File Name: user010001\m\p\p101000.ms.win (Mounted)



Spectrum 72 X 0.05 Y 0.05

Geometry [J] Zoom
 Display [F] Map
 Update All [F] Expand [F] Integrate [F] Contour
 Update Selected [F] UnExpand [F] Summing Region [F] Band [F] Contour
 Info [F] Log [F] Map

272 pps/pnA
at FP

Total 14583
126e 12757
15C 1245

87% beam purity
99% 15C

02019: Programs to run

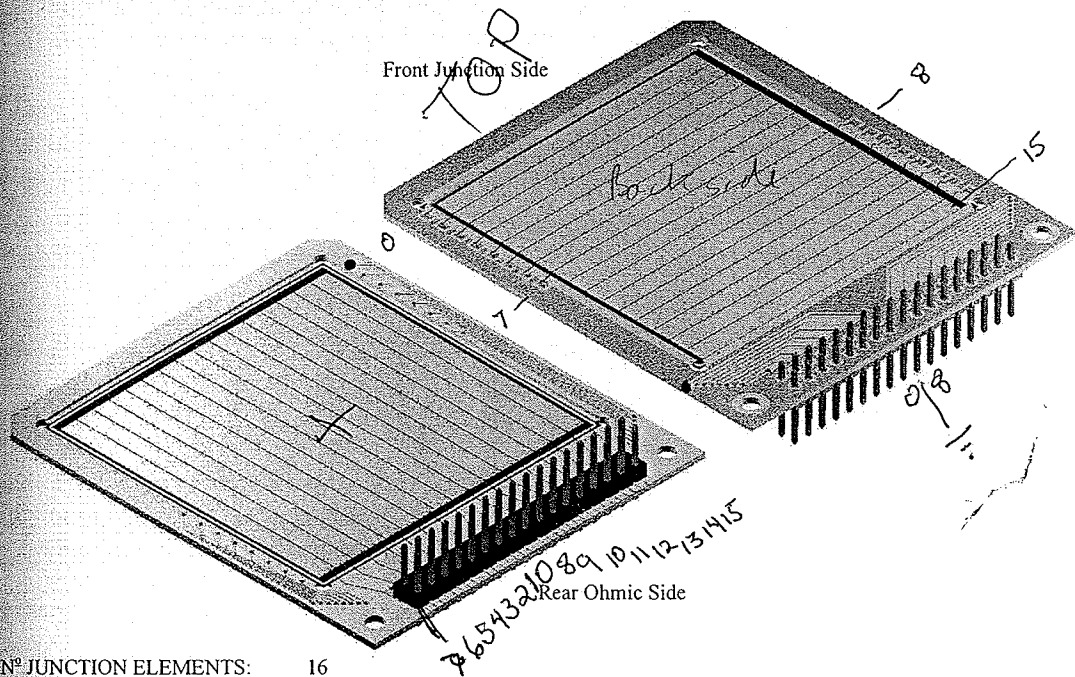
Program	Command	Comment
Chip control	gochip	file: 02019_Exp_2.setup
Pico shaper/discriminator control	gopico	LASSA: input-files/02019/ WU-Shap.dat and WU-Disc.dat
		Target Si: input-files/02019/WU-Target-Shap.dat
		Target Si: input-files/02019/WU-Target-Disc.dat

Program	Command	Comment
Elog server	goelog	

Program	Command	Comment
Readout	godag	
Scalers	goscaler	
Monitoring (V, T...)	goepics	
Elog client	elog	The server has to be started on spdaq29.
SpecTcl	gospec	
Bias for HiRA Si and Csl (CAEN)	telnet 35.9.56.160 1527	
id = user; passwd = user		
tab to access menu		
goup 1 = Si; group 2 = Csl		

MAPPING FOR
BACK SIDE OF TARGETS *Si.* DESIGN W1
SPECIALIST DETECTORS FOR NUCLEAR PHYSICS

SILICON DETECTOR TYPE: TOTALLY DEPLETED SINGLE OR DOUBLE SIDED DC MICROSTRIP.
 TECHNOLOGY: 4 INCH SILICON



N° JUNCTION ELEMENTS:	16
N° OHMIC ELEMENTS:	16
ELEMENT LENGTH:	49.5 mm
ELEMENT PITCH:	3.1 mm
ELEMENT WIDTH:	3000.0 µm
ACTIVE AREA:	50.0 x 50.0 mm ²
CHIP DIMENSIONS:	52.25 x 52.25 mm ² 53.78 x 53.78 mm ²
THICKNESS:	65, 80, 140, 250, 300, 500, 1000 and 1500 µm
WINDOW:	Junction: Available with Standard or Thin window optical or nuclear device. Ohmic: Standard
FULL DEPLETION VOLTAGE:	10 – 300 V subject to thickness selection
TOTAL CURRENT (FD):	1 – 2 µA
ELEMENT DARK CURRENT:	50 nA typically, 150 nA maximum
NOMINAL STRIP RESISTANCE:	100 MΩ
TOTAL ALPHA RESOLUTION:	55 keV Typical
METALLISATION:	Aluminum 3000 Å Junction: Available with 3% metal grid or as standard Ohmic: Standard
PACKAGE:	PCB with edge connections on one side. Special 'LASSA' kapton with frame Osaka PCB
CONNECTORS:	Single row unshrouded vertical or 90° pin header.
ACCEPTANCE:	100 %

QUALITY ASSURANCE: ISO9001



MICRON SEMICONDUCTOR

Si Target Test Run Started at 10.02 pm

targeted Poly (Thick) | GOM

Vault	Biases.	-V	uA	CsI	V	uA
Wassa	1	45	0.34		30	0.02
	2	75	1.57			
	3	48	2.34			
	4	55	2.2			
				Tar. S.	-40	

RUN 17 ^{12}Be on thick plastic start 0219

Trigger: HIRA ~~CS~~ Si singles

Beam intensity @ 2120 $\approx 10000/s$

target = thick poly stop 0239

RUN 18 OPENING SLITS TO GET MORE BEAM

target = thick Poly start 0240

HIRA Si singles stopped 0254

Run 19 continued 100 ~~masters~~ ~~start~~ ~~0259~~

Run 20 continued start 0200

RUN 21 CsI M=2 trigger start 4:45 junk

Run 22 CsI M=2 trigger start 5:00 am

20 masters s=1
target = thick poly

Group 01

Channel Name	V0Set	I0Set	W0n	IMon	Pw	Status	Ch#
Tow0Card15	210.00 V	4.00 uA	209.50 V	0.70 uA	On		
Tow0Card12	250.00 V	4.00 uA	250.25 V	0.98 uA	On		0.04.0
Tow0Card9	190.00 V	3.00 uA	189.50 V	0.40 uA	On		0.04.0
Tow0Card6	240.00 V	5.00 uA	240.25 V	2.02 uA	On		0.04.0
Tow1Card15	290.00 V	4.00 uA	289.75 V	1.20 uA	On		0.04.0
Tow1Card12	240.00 V	5.00 uA	239.50 V	1.48 uA	On		0.04.0
Tow1Card9	200.00 V	4.00 uA	200.00 V	1.24 uA	On		0.04.0
Tow1Card6	295.00 V	4.00 uA	294.25 V	1.04 uA	On		0.04.0
Tow2Card12	210.00 V	4.00 uA	210.25 V	0.62 uA	On		0.04.0
Tow2Card9	250.00 V	5.00 uA	249.50 V	0.94 uA	On		0.04.0
Tow2Card6	250.00 V	4.00 uA	249.50 V	1.24 uA	On		0.04.0
Tow2Card3	350.00 V	4.00 uA	349.50 V	1.38 uA	On		0.04.0
Tow3Card15	210.00 V	4.00 uA	209.75 V	0.92 uA	On		0.04.0
Tow3Card12	200.00 V	5.00 uA	199.75 V	1.10 uA	On		0.04.0
Tow3Card9	120.00 V	4.00 uA	119.75 V	0.82 uA	On		0.04.0
Tow3Card6	310.00 V	4.00 uA	309.25 V	2.44 uA	On		0.04.0

leakage current

5:45 am Tuesday

- 1 0.36 uA
- 2 1.03 uA
- 3 2.39 uA
- 4 2.03 uA

to go into vault

wall plugs

page 3

Z001 FC

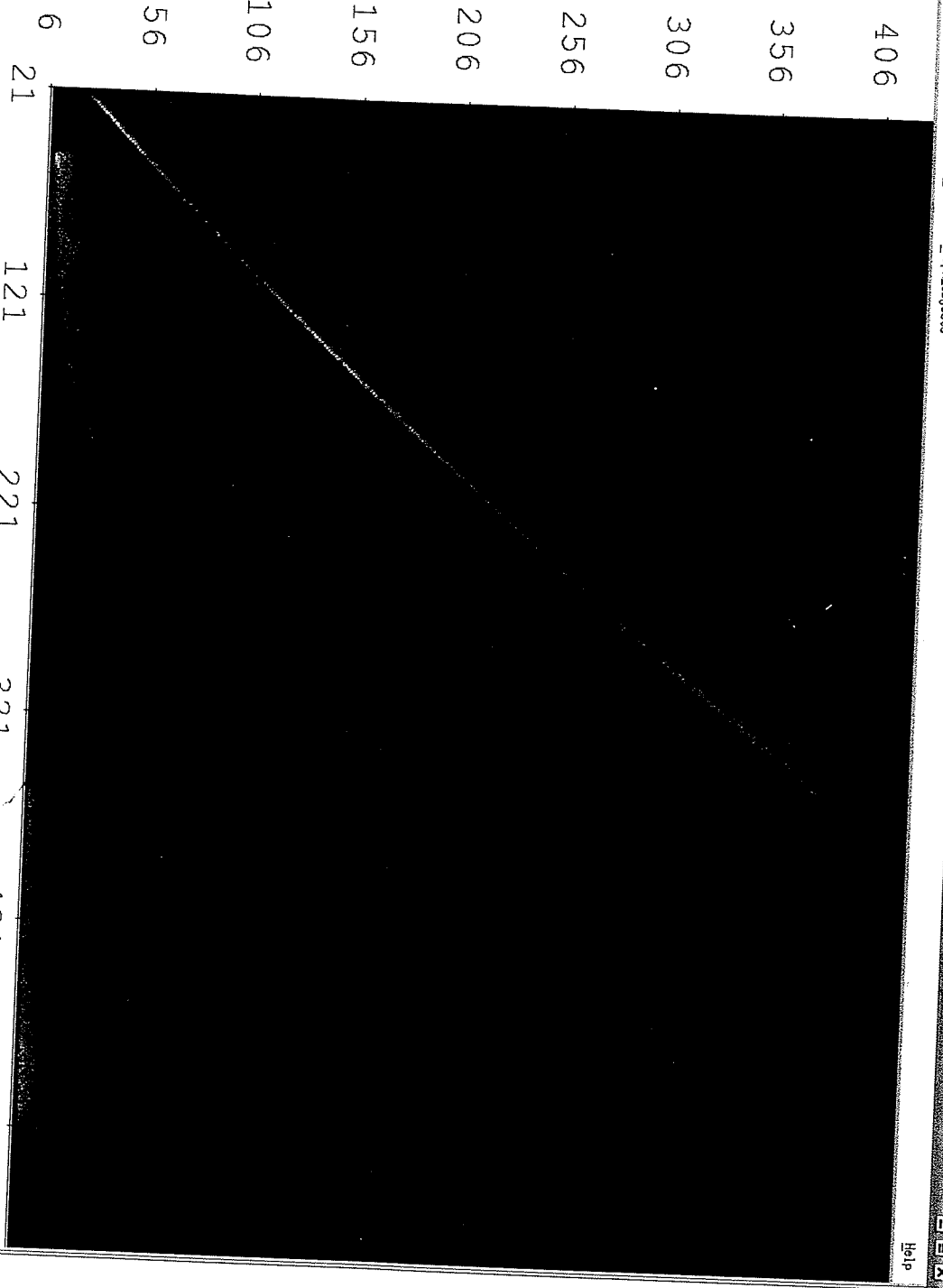
Z037 WP

need to insert before entering cave.



B-stop wall plug

Page 10



406
356
306
256
206
156
106
56
6
21 121 221 321 421 521
[14] TELE11.EB.VS.EF

Spectrum 14

X 435

Y 79

Counts 0

Geometry Zoom
Display
Display +
Update All
Update Selected
Info + - Log Map
Expand
Uncexpand
Marker
Summing Region
Integrate
Contour

Main Utility Setup Groups View
Group 01

Run 20 10/04/05
4:30

User

Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Ch#
Tow0Card15	210.00 V	4.00 uA	209.50 V	0.74 uA	On		0.04.0
Tow0Card12	250.00 V	4.00 uA	250.50 V	1.04 uA	On		0.04.0
Tow0Card9	190.00 V	3.00 uA	189.50 V	0.44 uA	On		0.04.0
Tow0Card6	240.00 V	5.00 uA	240.25 V	2.38 uA	On		0.04.0
Tow1Card15	290.00 V	4.00 uA	289.75 V	1.32 uA	On		0.04.0
Tow1Card12	240.00 V	5.00 uA	239.50 V	1.62 uA	On		0.04.0
Tow1Card9	200.00 V	4.00 uA	200.00 V	1.38 uA	On		0.04.0
Tow1Card6	295.00 V	4.00 uA	294.25 V	1.12 uA	On		0.04.0
Tow2Card12	210.00 V	4.00 uA	210.25 V	0.68 uA	On		0.04.0
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.04 uA	On		0.04.0
Tow2Card6	250.00 V	4.00 uA	249.50 V	1.34 uA	On		0.04.0
Tow2Card3	350.00 V	4.00 uA	349.50 V	1.58 uA	On		0.04.0
Tow3Card15	210.00 V	4.00 uA	209.75 V	1.06 uA	On		0.04.0
Tow3Card12	200.00 V	5.00 uA	199.75 V	1.16 uA	On		0.04.0
Tow3Card9	120.00 V	4.00 uA	120.00 V	0.88 uA	On		0.04.0
Tow3Card6	310.00 V	4.00 uA	309.25 V	2.88 uA	On		0.04.0

Main Utility Setup Groups View
Group 01

Run #22 10/04/05 - 4:40

User

Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Ch#
Tow0Card15	210.00 V	4.00 uA	209.50 V	0.76 uA	On		0.04.0
Tow0Card12	250.00 V	4.00 uA	250.50 V	1.06 uA	On		0.04.0
Tow0Card9	190.00 V	3.00 uA	189.50 V	0.44 uA	On		0.04.0
Tow0Card6	240.00 V	5.00 uA	240.00 V	2.48 uA	On		0.04.0
Tow1Card15	290.00 V	4.00 uA	289.75 V	1.38 uA	On		0.04.0
Tow1Card12	240.00 V	5.00 uA	239.50 V	1.70 uA	On		0.04.0
Tow1Card9	200.00 V	4.00 uA	200.00 V	1.44 uA	On		0.04.0
Tow1Card6	295.00 V	4.00 uA	294.25 V	1.14 uA	On		0.04.0
Tow2Card12	210.00 V	4.00 uA	210.25 V	0.70 uA	On		0.04.0
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.08 uA	On		0.04.0
Tow2Card6	250.00 V	4.00 uA	249.50 V	1.38 uA	On		0.04.0
Tow2Card3	350.00 V	4.00 uA	349.50 V	1.66 uA	On		0.04.0
Tow3Card15	210.00 V	4.00 uA	209.75 V	1.12 uA	On		0.04.0
Tow3Card12	200.00 V	5.00 uA	199.75 V	1.20 uA	On		0.04.0
Tow3Card9	120.00 V	4.00 uA	120.00 V	0.92 uA	On		0.04.0
Tow3Card6	310.00 V	4.00 uA	309.25 V	3.12 uA	On		0.04.0

Counts 0

Y 79

X 435

Spectrum 14

Geometry | Display | Display

Zoom

Update All | Update Selected | Expand | UnExpand

Marker | Summing Region | Band

The hasca Si were gated by themselves
 so we did not get protons, changed
 gate to hasca GSI

Run 23 start 6:00am mult 7/2
~~Run 23~~ ~~start 6:00am~~ ~~mult 7/2~~
 Target = thick Poly

found object scintillator was off
 stopped & restarted

Run 24 mult 7/2

Run# 24	Start: 6:15 Stop: 7:03	Date: 10/4/20 05
Beam: ○ ^{12}Be • ^{14}Be • mixed ^xHe • p • source	Trigger: Aira GSI mult 7/2 Target upsteam: Target downsteam: Thick Poly	On shift: Bob
Comments: no tracking		

D-04-

7 AM Stopped Run 24 to start taking α -data
for LASSA Calibration before Run starts fixing
the DAO.

Run 25

10/11/05. 7:20.

Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	WMon	IMon	Pw	Status	Ch#
Tow0Card15	210.00 V	4.00 uA	209.50 V	0.78 uA	On		0.04.0
Tow0Card12	250.00 V	4.00 uA	250.50 V	1.06 uA	On		0.04.0
Tow0Card9	190.00 V	3.00 uA	189.50 V	0.44 uA	On		0.04.0
Tow0Card6	240.00 V	5.00 uA	240.00 V	2.58 uA	On		0.04.0
Tow1Card15	290.00 V	4.00 uA	289.75 V	1.44 uA	On		0.04.0
Tow1Card12	240.00 V	5.00 uA	239.50 V	1.76 uA	On		0.04.0
Tow1Card9	200.00 V	4.00 uA	200.00 V	1.50 uA	On		0.04.0
Tow1Card6	295.00 V	4.00 uA	294.25 V	1.16 uA	On		0.04.0
Tow2Card12	210.00 V	4.00 uA	210.25 V	0.70 uA	On		0.04.0
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.12 uA	On		0.04.0
Tow2Card6	250.00 V	4.00 uA	249.50 V	1.42 uA	On		0.04.0
Tow2Card3	350.00 V	4.00 uA	349.50 V	1.72 uA	On		0.04.0
Tow3Card15	210.00 V	4.00 uA	209.75 V	1.26 uA	On		0.04.0
Tow3Card12	200.00 V	5.00 uA	199.75 V	1.22 uA	On		0.04.0
Tow3Card9	120.00 V	4.00 uA	120.00 V	0.94 uA	On		0.04.0
Tow3Card6	310.00 V	4.00 uA	309.25 V	3.36 uA	On		0.04.0

Run# 25	Start: 7:19 Stop: 7:45	Date: 10/09/20 05
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p ⊙ source 	Trigger: Target upstream: Target downstream:	On shift: Mark
Comments: 5.4 mg/cm ² tin/lead foil cover.		

Beam tuning = Tuesday Morning

upon inspection found a clear
was plugged into Lassa Cst "port",
Maybe this caused the problem that
Lassa Si 2 did not seem to have
all its front strips into the computer.

^{14}Be beam is 75% pure
has ^{12}Be as major contaminant
also some $\text{He} + \text{He}$. not predicted
by this.

EST

57% transmission from extended ³⁹

focal plane to object scintillator

30000s' on extended focal plane

70s' Si singles triggers

18000 on object scintillator

with 30 attenuator

can go to 10 attenuator

Run 28

Main Utility Setup Groups View								User
Group 01	Channel Name	V0Set	I0Set	WMon	IMon	Rw	Status	Trip #
	Tow0Card15	210.00 V	6.00 uA	209.50 V	0.74 uA	On		1.00s.000
	Tow0Card12	250.00 V	6.00 uA	250.25 V	1.02 uA	On		1.00s.001
	Tow0Card9	190.00 V	6.00 uA	189.50 V	0.44 uA	On		1.00s.002
	Tow0Card6	240.00 V	6.00 uA	240.00 V	1.96 uA	On		1.00s.003
	Tow1Card15	290.00 V	6.00 uA	289.50 V	1.34 uA	On		1.00s.005
	Tow1Card12	240.00 V	6.00 uA	239.50 V	1.64 uA	On		1.00s.006
	Tow1Card9	200.00 V	6.00 uA	200.00 V	1.36 uA	On		1.00s.007
	Tow1Card6	295.00 V	6.00 uA	294.25 V	1.10 uA	On		1.00s.008
	Tow2Card12	210.00 V	6.00 uA	210.00 V	0.66 uA	On		1.00s.011
	Tow2Card9	250.00 V	5.00 uA	249.50 V	1.04 uA	On		1.00s.012
	Tow2Card6	250.00 V	6.00 uA	249.50 V	1.30 uA	On		1.00s.013
	Tow2Card3	350.00 V	6.00 uA	349.50 V	1.60 uA	On		1.00s.014
	Tow3Card15	210.00 V	6.00 uA	209.75 V	1.26 uA	On		1.00s.015
	Tow3Card12	200.00 V	6.00 uA	199.75 V	1.14 uA	On		1.00s.016
	Tow3Card9	120.00 V	6.00 uA	119.75 V	0.90 uA	On		1.00s.017
	Tow3Card6	310.00 V	7.00 uA	309.25 V	3.20 uA	On		1.00s.018

Display/Edit Group 01

LocEn V0 10

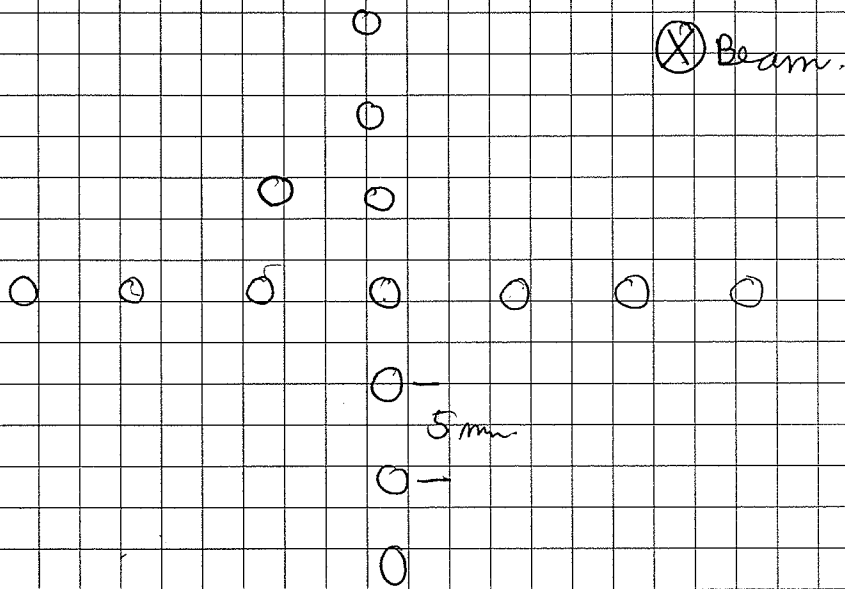
T

CAEN SY2527

^{14}Be 8.7 pps/pmA.

expected 26 pps/pmA.

TCRDC2 mask \Rightarrow Distance
between holes = 5 mm



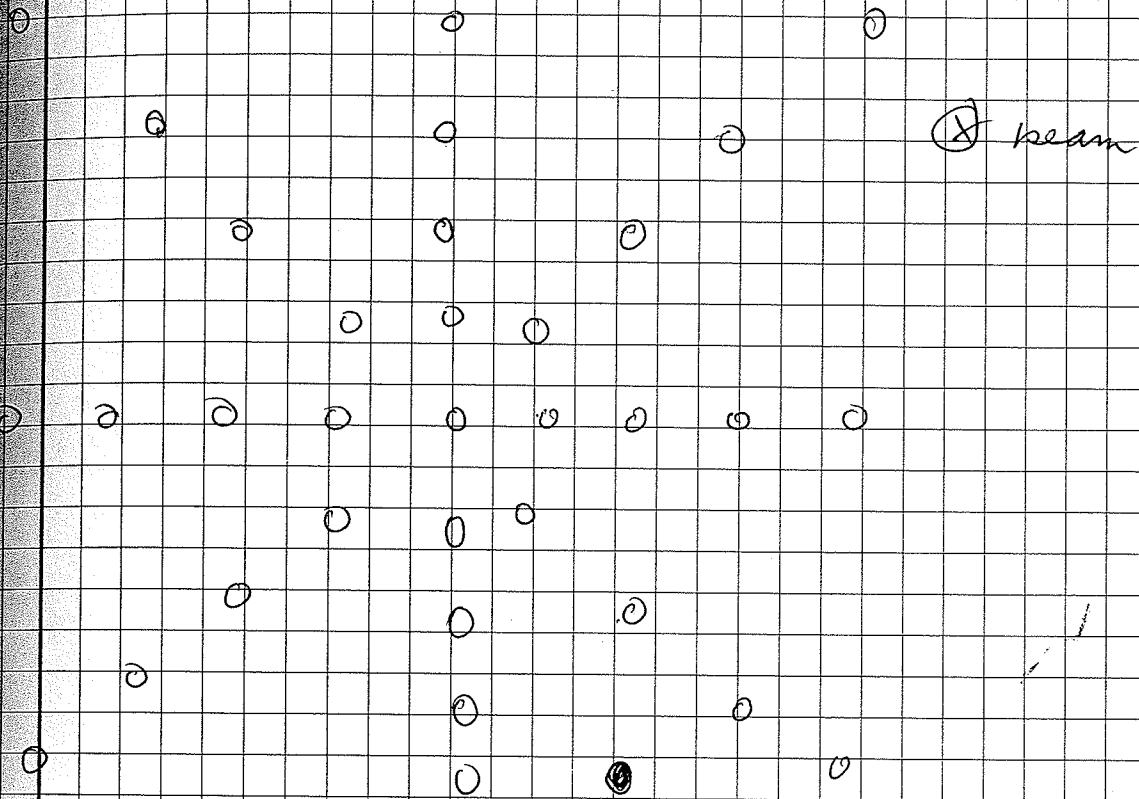
TCRDC2 mask in I215TL \rightarrow 6" distance between TCRDC1 and its mask $\sim 5 \frac{1}{2}'' = 140 \text{ mm}$

for both TCRDC there are
2.54 ~~mm/pad~~ on X axis
mm/pad.

TCRDC1

mask

square size = 20 mm



distance between TCRDC1 and its mask
is $6\frac{1}{2}'' = 165 \text{ mm}$

distance between TCRDC1 + TCRDC2
= $25'' \frac{1}{4} = 641.3 \text{ mm}$

distance between TCRDC1 and Image
= $13\frac{1}{4}'' = 336.5 \text{ mm}$

HV

950

(ppac1)

1500

(ppac2)

Lassa leakage currents

- 1 0.4 μ A
- 2 1.70 μ A
- 3 2.62 μ A
- 4 2.4 μ A

cables to check timing

- 44 Lassa Gate
- 45 Lassa CSZ OR
- 31 busy
- 32 COINC enabled Lassa CSZ
- 33 trigger.

Run 30

& on Lassa + ARA
 as machine is down!
 bad Lassa gate

TDC channels 100 ps / channel
 si are all a few hundred ps wide
 CSZ is about 1000 ns wide

Run# 31	Start : 19-50 Stop:	Date: 10/___/20 05
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p ⊙ source 	Trigger: Lassa + Hira SE Singles Target upsteam: Target downsteam:	On shift: BOB
Comments:		

Run# 32	Start : 21:45 Stop:	Date: 10/3/20 05
Beam: <ul style="list-style-type: none"> ⊙ ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: Hira Singles Target upsteam: Target downsteam: Thick Poly	On shift: Bob Andy
Comments: Tracking detector development during this run.		

Run# 33	Start : Stop:	Date: 10/3/20 05
Beam: <ul style="list-style-type: none"> ● ^{12}Be ● ^{14}Be ● mixed ^xHe ● p ● source 	Trigger: Ara Si Singles	On shift: bob
Target upsteam: Target downsteam: Thick Poly		
Comments: Tracking detector development during run.		

Run# 34	Start : Stop:	Date: 10/___/20 05
Beam: <ul style="list-style-type: none"> ● ^{12}Be ● ^{14}Be ● mixed ^xHe ● p ● source 	Trigger: Hira Si Singles	On shift: bob
Target upsteam: Target downsteam: Thick Poly		
Comments: no tracking crashed		

CRDC 1 (upstream) sparks, maybe
damaged wire, turned off until it
can be repaired

Run# 35	Start : Stop:	Date: 10/___/20 05
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: Target upstream: Target downstream:	On shift:
Comments:		

@ 100K at object simulates the downstream
tracking detector in 84% efficient
but computer ~~live~~ time is 60%.

Run# 35	Start: 2:00 am Stop:	Date: 10/4/20 05
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA inner towers	On shift: Bob
Target upstream:		
Target downstream: Thick Poly		
Comments: Tower 2 in Tower 0 in data stream. no attenuator		

90K in object rates

68% live time

300 events/s

400 raw triggers/s

AFP = 100 K

Bassa	Si	1 = 36	2 = 66	3 = 100	4 = 60
	CST	35	27	27	35

HIRA	Si	~ 130 s ⁻¹
	CST	~ 140 s ⁻¹

* note data stream has changed
Tower 2 is now in Tower 0 position
Tower 0 + tower 3 are not being
read in DAQ

Run #35 10/05/02 2:10 P

- Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	WMon	IMon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.76 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.04 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	240.00 V	2.84 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.50 V	1.42 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.78 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.42 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.18 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.68 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.08 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.36 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.68 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	2.04 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.16 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	119.75 V	0.92 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.38 uA	On		1.00s.0	

Display/Edit Group 01

LocEn V0 10

T | CAEN SY252

now use meter for Lassa Gates

Run# 36	Start : Stop:	Date:10/___/20 05
Beam: <ul style="list-style-type: none"> ● ¹²Be ● ¹⁴Be ● mixed ⁴He ● p ● source 	Trigger: HIRA Inner towers Target upsteam: Target downsteam: Thick Poly	On shift: Bob et al.
Comments: continued 20 minutes		

Run# 37	Start : 3:00 am Stop:	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> ● ^{12}Be ● ^{14}Be ● mixed ^xHe ● p ● source 	Trigger: Hira inner towers Target upsteam: Target downsteam: Thick Poly	On shift: Bds
Comments: continued ended by computer crash		

Run 38 continued 3:15 am

Run# 38	Start : 3:15 Stop: 3:33	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> ● ^{12}Be ● ^{14}Be ● mixed ^xHe ● p ● source 	Trigger: HiRA inner Towers Target upsteam: Target downsteam: Thick poly	On shift: Sergei Sylwe Jogi
Comments: XLM1 problem. Ended but not properly. Had to reboot the VME		

Run# 39	Start : 3:48 Stop: 4:03	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA inner towers	On shift: Sergay Sylvie Sergi
	Target upsteam:	
Target downstream: Thick poly		
Comments: ONLY INNER TOWERS T2=TO, T1=T1		

Run# 40	Start : 4:03 Stop: 4:33	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA inner towers	On shift: Sergay Sylvie Sergi
	Target upsteam:	
Target downstream: Thick poly.		
Comments: ONLY INNER TOWERS T2=T ϕ , T1=T1		

Run 41: junk, need pb.

Run# 42	Start: 4:34 Stop: 5:04	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HIRA inner towers	On shift: S+S+S
	Target upsteam: Target downstream: Thick poly	
Comments:		

- Main Utility Setup Groups View Run # 42 L-212 10/5/05. User

Group 01	Channel Name	V0Set	I0Set	WMon	IMon	Rw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.78 uA	On	1.00s.0			
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.06 uA	On	1.00s.0			
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On	1.00s.0			
Tow0Card6	240.00 V	6.00 uA	240.00 V	2.98 uA	On	1.00s.0			
Tow1Card15	290.00 V	6.00 uA	289.50 V	1.44 uA	On	1.00s.0			
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.82 uA	On	1.00s.0			
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.48 uA	On	1.00s.0			
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.20 uA	On	1.00s.0			
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.72 uA	On	1.00s.0			
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.12 uA	On	1.00s.0			
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.40 uA	On	1.00s.0			
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.72 uA	On	1.00s.0			
Tow3Card15	210.00 V	6.00 uA	209.75 V	2.18 uA	On	1.00s.0			
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.20 uA	On	1.00s.0			
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.94 uA	On	1.00s.0			
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.40 uA	On	1.00s.0			

Display/Edit Group 01 LocEn V0 I0 T | CAEN SY252

Run# 45	Start : 6:15 Stop: 6:45	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HiRA inner towers	On shift: S+S+S
	Target upsteam: Target downsteam: Thick poly	
Comments:		

Run # 45 10/5/05 - 6:17

- Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	WMon	IMon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.80 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.10 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.10 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.50 V	1.50 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.90 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.56 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.24 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.74 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.16 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.48 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.80 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	2.28 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.26 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.58 uA	On		1.00s.0	

Display/Edit Group 01

LocEn V0 I0

T | CAEN SY252

Run# 46	Start : 6:45 Stop: 7:11	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA inner towers	On shift: S+S+S
	Target upsteam: Target downstream: Thick poly	
Comments: crash of readout		

Run# 47	Start : 7:11 Stop: 7:23	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA inner towers	On shift:
	Target upsteam: Target downstream: Thick poly.	
Comments: Crash of readout.		

Run# 48	Start : 7:25 Stop: 8:00	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HORA INNER TOWERS	On shift: Mark Marc-Jan Sergey Betty
	Target upstream:	
	Target downstream: thick poly	
Comments:		

Run# 49	Start : 8:00 Stop: 8:30	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HORA INNER TOWERS ONLY	On shift: Mark Marc-Jan Sergey Betty
	Target upstream:	
	Target downstream: thick poly	
Comments: E log does not show 49 (showed up after end of run!)		

Run 47 10/05/2005 7:43 AM

Main Utility Setup Groups View
Group 01

User

Channel Name	V0Set	I0Set	VMon	IMon	Rw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.84 uA	On		1.00s.000	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.14 uA	On		1.00s.001	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.50 uA	On		1.00s.002	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.20 uA	On		1.00s.003	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.58 uA	On		1.00s.005	
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.98 uA	On		1.00s.006	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.62 uA	On		1.00s.007	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.28 uA	On		1.00s.008	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.011	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.22 uA	On		1.00s.012	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.54 uA	On		1.00s.013	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.86 uA	On		1.00s.014	
Tow3Card15	210.00 V	6.00 uA	209.75 V	2.34 uA	On		1.00s.015	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.30 uA	On		1.00s.016	
Tow3Card9	120.00 V	6.00 uA	120.00 V	1.02 uA	On		1.00s.017	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.70 uA	On		1.00s.018	

Display/Edit Group 01

Lower Voltage T CAPL GROUP

Run# 50	Start : 8:30 Stop : 9:00	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> ● ¹²Be ● ¹⁴Be ● mixed ^xHe ● p ● source 	Trigger: HIRA INVER TOWERS	On shift: Mark Marc-Jan Sergis Betty
	Target <small>upstream:</small> Target <small>downstream:</small> Ethide Poly	
Comments:		

Run #50

8:44 AM 10/05/2005

Main Utility Setup Groups View

Group 01	User							
Channel Name	V0Set	I0Set	WMon	IMon	Rv	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.25 V	0.82 uA	On			
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.10 uA	On		1.00s.000	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.001	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.18 uA	On		1.00s.002	
Tow1Card15	290.00 V	6.00 uA	289.50 V	1.56 uA	On		1.00s.003	
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.94 uA	On		1.00s.005	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.60 uA	On		1.00s.006	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.007	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.008	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.20 uA	On		1.00s.011	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.50 uA	On		1.00s.012	
Tow2Card3	350.00 V	6.00 uA	349.25 V	1.86 uA	On		1.00s.013	
Tow3Card15	210.00 V	6.00 uA	209.75 V	2.38 uA	On		1.00s.014	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.26 uA	On		1.00s.015	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.016	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.74 uA	On		1.00s.017	
							1.00s.018	

Run# 51	Start : 9:03 Stop : 9:32	Date:10/5/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HIRA INNER TOWERS	On shift: Mark Marc-Jean Sergey Betty
	Target upsteam: Target downsteam: thick poly	
Comments: 0		

Run# 52	Start : 9:33 Stop: 9:46	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HiRA INNER TOWERS	On shift: Mark Marc-Jan Sergey Bethy
	Target ^{upstream} : Target ^{downstream} : thick poly (imm)	
Comments: Readout Crashed		

Run 52 9:49 AM 10/05/2005

- Main Utility Setup Groups View

Group 01									User
Channel Name	V0Set	I0Set	W0n	IM0n	Rv	Status	Trip	#	
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.000		
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.10 uA	On		1.00s.001		
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.002		
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.20 uA	On		1.00s.003		
Tow1Card15	290.00 V	6.00 uA	289.50 V	1.56 uA	On		1.00s.005		
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.94 uA	On		1.00s.006		
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.007		
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.008		
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.76 uA	On		1.00s.011		
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.18 uA	On		1.00s.012		
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.50 uA	On		1.00s.013		
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.86 uA	On		1.00s.014		
Tow3Card15	210.00 V	6.00 uA	209.75 V	2.40 uA	On		1.00s.015		
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.26 uA	On		1.00s.016		
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.017		
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.78 uA	On		1.00s.018		

Run# 53	Start : 9:46 Stop: 10:19	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed • p • source ^xHe	Trigger: HIRA INNER TOWERS	On shift: Mark Sergey Betty Marc-Jan
	Target upsteam: Target downstream: Ethid poly	
Comments:		

Run# 54	Start : 10:18 Stop: 10:49	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed • p • source ^xHe	Trigger: HIRA INNER TOWER	On shift: Mark Sergey Betty Marc-Jan
	Target upsteam: Target downstream: Ethid poly 1mm	
Comments:		

Run 59

10:44 AM

10/05/2005

Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	WMon	IMon	Rv	Status	Trip	#
Tow0Card15	210.00 V	6.00 μ A	209.50 V	0.82 μ A	On		1.00s.000	
Tow0Card12	250.00 V	6.00 μ A	250.25 V	1.10 μ A	On		1.00s.001	
Tow0Card9	190.00 V	6.00 μ A	189.50 V	0.48 μ A	On		1.00s.002	
Tow0Card6	240.00 V	6.00 μ A	240.00 V	3.22 μ A	On		1.00s.003	
Tow1Card15	290.00 V	6.00 μ A	289.50 V	1.56 μ A	On		1.00s.005	
Tow1Card12	240.00 V	6.00 μ A	239.50 V	1.94 μ A	On		1.00s.006	
Tow1Card9	200.00 V	6.00 μ A	200.00 V	1.58 μ A	On		1.00s.007	
Tow1Card6	295.00 V	6.00 μ A	294.25 V	1.26 μ A	On		1.00s.008	
Tow2Card12	210.00 V	6.00 μ A	210.00 V	0.74 μ A	On		1.00s.011	
Tow2Card9	250.00 V	5.00 μ A	249.50 V	1.18 μ A	On		1.00s.012	
Tow2Card6	250.00 V	6.00 μ A	249.50 V	1.50 μ A	On		1.00s.013	
Tow2Card3	350.00 V	6.00 μ A	349.50 V	1.86 μ A	On		1.00s.014	
Tow3Card15	210.00 V	6.00 μ A	209.75 V	2.42 μ A	On		1.00s.015	
Tow3Card12	200.00 V	6.00 μ A	199.75 V	1.24 μ A	On		1.00s.016	
Tow3Card9	120.00 V	6.00 μ A	120.00 V	0.98 μ A	On		1.00s.017	
Tow3Card6	310.00 V	7.00 μ A	309.25 V	3.78 μ A	On		1.00s.018	

Run# 55	Start: 10:49 Stop:	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA INNER TOWERS	On shift: Mark Sergey Bebty Marc Jan
	Target upsteam:	
	Target downsteam: thick poly 1mm	
Comments: Stopped Run to look out COADCs Lossa 2 CSI 1 was missing		

Lassa Bias

3: 2.42 μA 1: 0.38 μA

QI

0.04 μA 4: 2.3 μA 2: 1.65 μA Run 56 α calibration HIRA Si singles.Run 57 α calibration LASA Si singles.Run 58 α calibration HIRA Si singles.

XLM crashed.

#58

- Main Utility Setup Groups View

Group 01

User

Channel Name	V0Set	I0Set	Wbn	IMbn	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 μA	209.50 V	0.82 μA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 μA	250.25 V	1.10 μA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 μA	189.50 V	0.48 μA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 μA	240.00 V	3.22 μA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 μA	289.50 V	1.56 μA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 μA	239.50 V	1.94 μA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 μA	200.00 V	1.58 μA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 μA	294.25 V	1.26 μA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 μA	210.00 V	0.74 μA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 μA	249.50 V	1.18 μA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 μA	249.50 V	1.50 μA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 μA	349.50 V	1.86 μA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 μA	209.75 V	2.42 μA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 μA	199.75 V	1.24 μA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 μA	120.00 V	0.98 μA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 μA	309.25 V	3.78 μA	On		1.00s.0	

Lassa leakage

2:45 Wednesday

1 = 0.38 μA

2 = 1.66

3 = 2.43

4 = 2.3 μA

15:10 turned Bias back side off as if looked like
~~that~~ that the front side bias was turned
off

Run 59 - stopped - back Bias Bedside was still off.

Run 60 - α calibration HiRA Si Singles.

Run# 61	Start: 16:00 Stop: 16:14	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^4He • p • source 	Trigger: HiRA Si Singles	On shift: Andy
	Target upsteam:	
	Target downsteam: Etchid poly	
Comments: Two inner towers only T2=T0 T1=T1		

Stopped again, Tracking detector was fixed, beam line opened for installation. Mike P arrived to debug DAQ problems

for towers.

Run# 62	Start: 19:04 Stop: 19:15	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA & singles	On shift:
	Target upstream: Target downstream: Thick poly	
Comments: NO CRDC 4 HiRA towers back in A pin-in fan-out was not setup to the pool setup.		

Run# 63	Start: 19:18 Stop: 19:31	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA & singles	On shift:
	Target upstream: Target downstream: Thick poly	
Comments: Run ended for beam tuning NO CRDCs		

RF gone

(Telescope 13 CSI 0,2) have wiggles in CSI energy

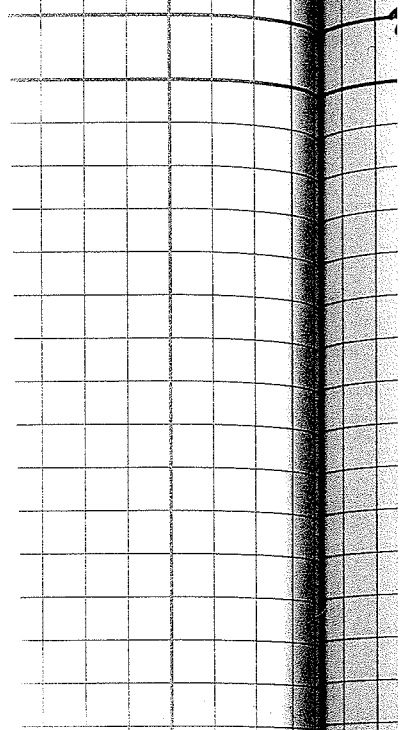
Run 64 stopped for beam tuning

Run# 64	Start : Stop:	Date: 10/4/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: Hira Si Singles Thick Poly	On shift: Bob
	Target upsteam: Target downsteam: Thick Poly	
Comments:		

2255 beam lock

Run# 65 64	Start : 2255 Stop: 2355	Date: 10/___/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Si Single	On shift: Sylvia
	Target upsteam: Target downsteam: Thick poly	
Comments: NO CRDC		

Run# 66	Start : 23:55 Stop: 00:13	Date: 10/5/2005 6
Beam: • ¹² Be • ¹⁴ Be • mixed ^x He • p • source	Trigger: HiRA & single	On shift: Sprie
	Target ^{upstream} : Target ^{downstream} : Thick poly	
Comments: No CRDC lost beam. lost vacuum in K1200		



- Main Utility Setup Groups View

Run 66

10/6/05
10:07

User

Group 01	Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Trip	#
	Tow0Card15	210.00 V	6.00 uA	209.25 V	0.80 uA	On		1.00s.0	
	Tow0Card12	250.00 V	6.00 uA	250.25 V	1.08 uA	On		1.00s.0	
	Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
	Tow0Card6	240.00 V	6.00 uA	239.75 V	3.34 uA	On		1.00s.0	
	Tow1Card15	290.00 V	6.00 uA	289.50 V	1.54 uA	On		1.00s.0	
	Tow1Card12	240.00 V	6.00 uA	239.50 V	1.92 uA	On		1.00s.0	
	Tow1Card9	200.00 V	6.00 uA	200.00 V	1.56 uA	On		1.00s.0	
	Tow1Card6	295.00 V	6.00 uA	294.25 V	1.24 uA	On		1.00s.0	
	Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
	Tow2Card9	250.00 V	5.00 uA	249.50 V	1.18 uA	On		1.00s.0	
	Tow2Card6	250.00 V	6.00 uA	249.50 V	1.50 uA	On		1.00s.0	
	Tow2Card3	350.00 V	6.00 uA	349.25 V	1.84 uA	On		1.00s.0	
	Tow3Card15	210.00 V	6.00 uA	209.75 V	2.78 uA	On		1.00s.0	
	Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
	Tow3Card9	120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
	Tow3Card6	310.00 V	7.00 uA	309.25 V	3.78 uA	On		1.00s.0	

Display/Edit Group 01

LocEn V0 10

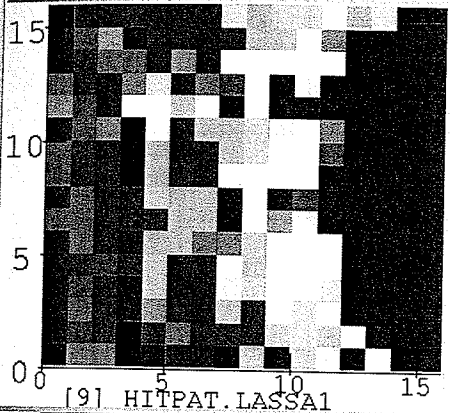
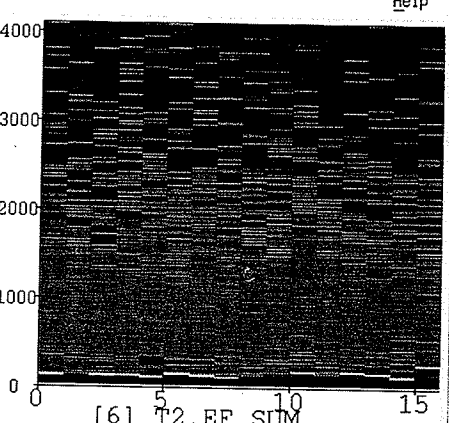
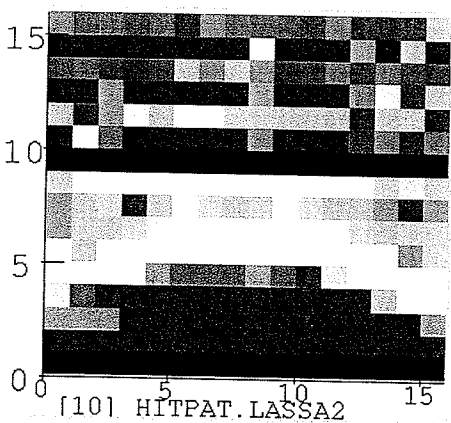
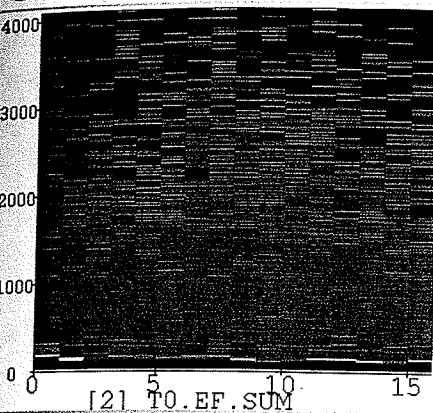
T

CAEN SY252

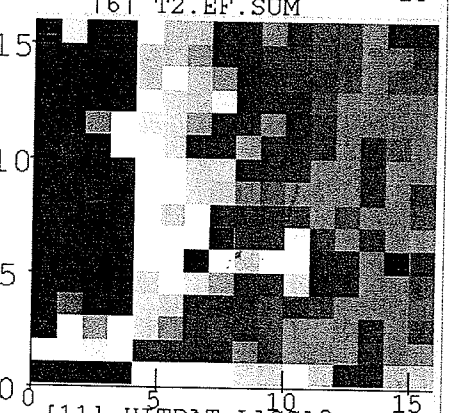
Run# 68	Start: 1:43 Stop: 2:40	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^4He • p • source 	Trigger: HIRA Si singles	On shift: S ³
	Target upstream:	
	Target downstream: Thick poly	
Comments: NO CRDC At begin: ~ 150 000 /s rate for XFP. the intensity is dropping Lost beam lost vacuum in 12:00		

Xamine - /usr02019/Current/Spec/HitPat/ASiC/SumSum_asicwin [Modified]

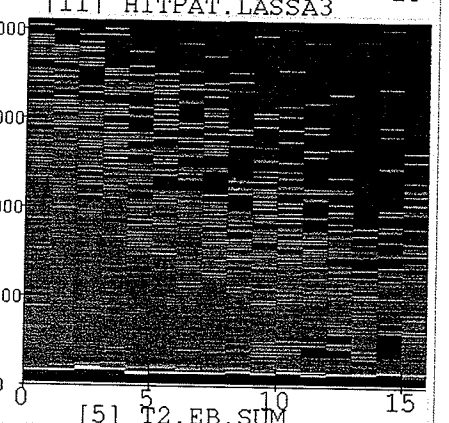
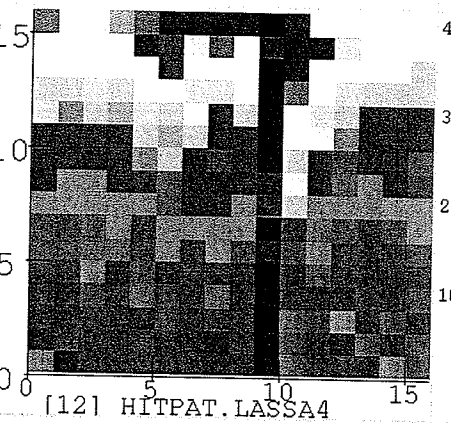
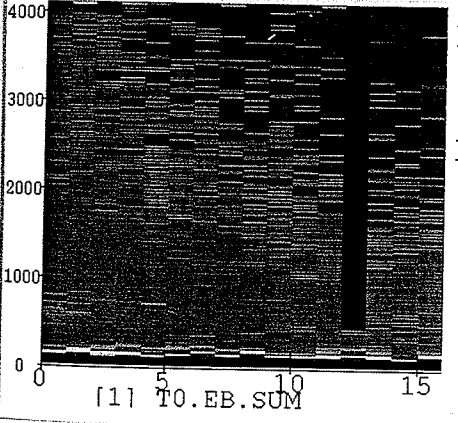
File Window Spectra Options Graph_objects



¹²Be + CH₂ (1mm)

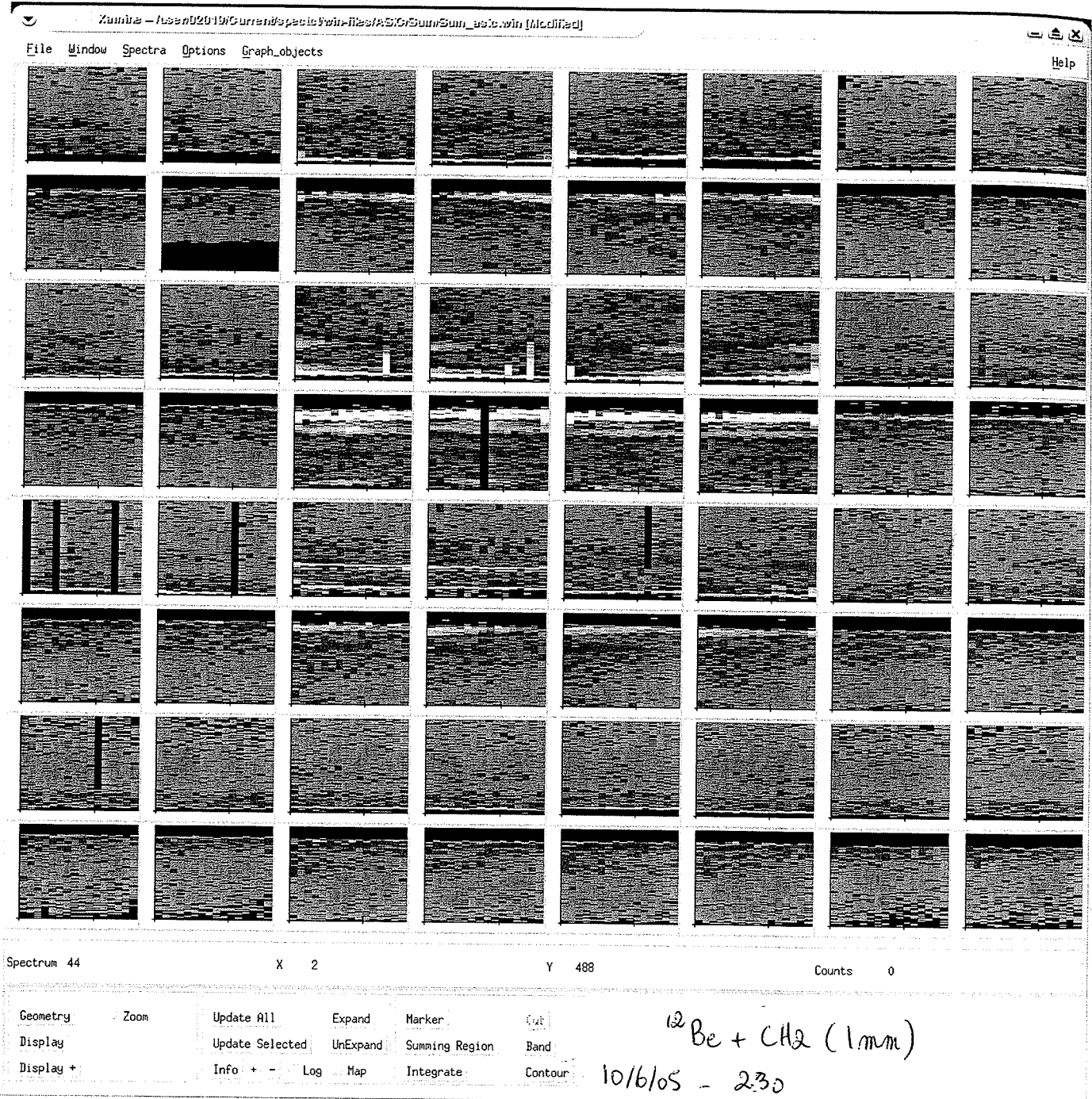


10/6/05 2:25



Spectrum 11 X 0 Y 0 Counts 0

Geometry Zoom Update All Expand Marker Cut
 Display Update Selected UnExpand Summing Region Band
 Display + Info + - Log Map Integrate Contour



I current for the LASSA detectors

L1: 0.38 μA L2: 1.6 μA

L3: 2.4 μA L4: 2.0 μA

Poly was out, ^(0.4mm) C - target
was inserted

We are waiting the beam, vacuum
problem happened second times

END exp with Poly thick

Run# 69	Start: 3:08 Stop: 4:03	Date: 10/6/2005
Beam: • ^{12}Be • ^{14}Be • mixed ^xHe • p • source	Trigger: HiRA Si single C (0.4MM) Target upsteam: Target downsteam: ^{12}C	On shift:
Comments: 1.4 ePA . HiRA trigger Stopped ? was HiRA trig. (all back) Start new run.		

- Main Utility Setup Groups View

Run 69

3:27

10/6/05

User

Group 01

Channel Name	V0Set	I0Set	WMon	IMon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.80 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.10 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.40 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.50 V	1.54 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.94 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.24 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.18 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.86 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	2.86 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.84 uA	On		1.00s.0	

Display/Edit Group 01

LocEn V0 10

T

CAEN SY252

Run# 70	Start: 4:04 Stop: 4:52	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HIRA S: Single	On shift: S3
	Target upsteam: Target downsteam: ¹² C (0.4mm)	
Comments: No CRDC Ended because of no HIRA trigger appearing in scaler.		

Run# 71	Start: 4:52 Stop: 5:53	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HIRA Si Single	On shift: S ³
	Target upsteam: Target downsteam: ¹² C (0.4 mm)	
Comments: NO CRDC Run ended when no HIRA trigger (again!)		

Run# 71 10/6/05
 - Main Utility Setup Groups View 5:40 User

Group 01	Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Trip	#
	Tow0Card15	210.00 V	6.00 uA	209.25 V	0.80 uA	On		1.00s.0	
	Tow0Card12	250.00 V	6.00 uA	250.25 V	1.10 uA	On		1.00s.0	
	Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
	Tow0Card6	240.00 V	6.00 uA	239.75 V	3.44 uA	On		1.00s.0	
	Tow1Card15	290.00 V	6.00 uA	289.50 V	1.56 uA	On		1.00s.0	
	Tow1Card12	240.00 V	6.00 uA	239.50 V	1.94 uA	On		1.00s.0	
	Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
	Tow1Card6	295.00 V	6.00 uA	294.25 V	1.24 uA	On		1.00s.0	
	Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
	Tow2Card9	250.00 V	5.00 uA	249.50 V	1.20 uA	On		1.00s.0	
	Tow2Card6	250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
	Tow2Card3	350.00 V	6.00 uA	349.25 V	1.88 uA	On		1.00s.0	
	Tow3Card15	210.00 V	6.00 uA	209.75 V	2.90 uA	On		1.00s.0	
	Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
	Tow3Card9	120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
	Tow3Card6	310.00 V	7.00 uA	309.25 V	3.88 uA	On		1.00s.0	

Run# 72	Start : 5:54 Stop:	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Si single	On shift: S^3
	Target upsteam:	
Comments: No CRDC Stop due to no triggers		

#73 Junk no triggers

[205 DS was off read current of

#74 started at 6:32 am

Run# 74	Start : 6:32 AM Stop: 7:32	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Si Singles	On shift: S^3
	Target upsteam:	
Comments: No CRDC No HIRA at He end of run.		

Run 74 10/6/2005 7:05

- Main Utility Setup Groups View
Group 01

User

Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.80 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.08 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.42 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.50 V	1.54 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.94 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.56 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.74 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.18 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.50 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.84 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	2.90 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.82 uA	On		1.00s.0	

PUT THICK POLY BACK

Run# 75	Start: 7:42 Stop: 8:41	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ³He • p • source 	Trigger: HiRA Si singles	On shift: Mark Belts Marc-Jan.
	Target upstream: Target downstream: CH2 (1mm)	
Comments: No CRDC No HiRA biggers (see learning moment-note) ↳ paused and resume fixed it.		

Run #75 10/06/2005 8:05 AM

- Main Utility Setup Groups View

Group 01

User

Channel Name	V0Set	I0Set	VMon	I0Mon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.80 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.08 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.42 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.50 V	1.54 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.94 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.56 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.18 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.84 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	2.92 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.84 uA	On		1.00s.0	

Run# 76	Start: 8:41 Stop: 9:37	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HIRA si Singh Target upsteam: Target downsteam: CH ₂ thick p/b	On shift: Mark Betty Marc-Jan.
Comments: No CRDCs		

1/30/05

Intermediate Image setup for 02019

Tracking CRDCs.

Distance between TCRDC1 and TCRDC2 : $25''^{1/4} = 641.3$

_____ " _____ and Image : $13''^{1/4} = 336.5$

Page 2 intermediate Image Page.
TCRDC1 mask in : T214TL $\rightarrow 6''$

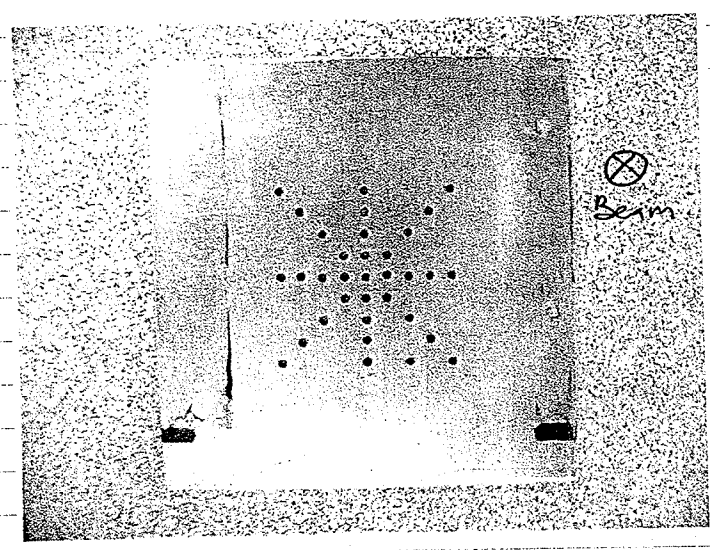
TCRDC2 mask in : T215TL $\rightarrow 6''$

Distance between TCRDC1 and its mask $\sim 6''^{1/2} = 165$

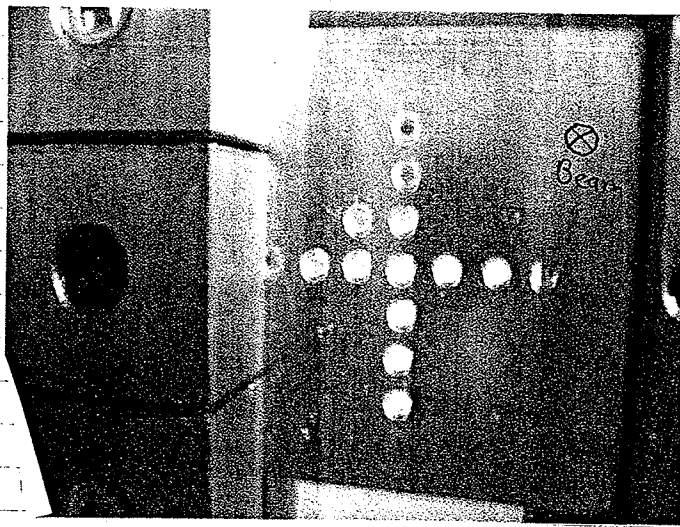
_____ " _____ 2 _____ " _____ $\sim 5''^{1/2} = 140$

Extra hole in TCRDC1 mask : Bottom - South

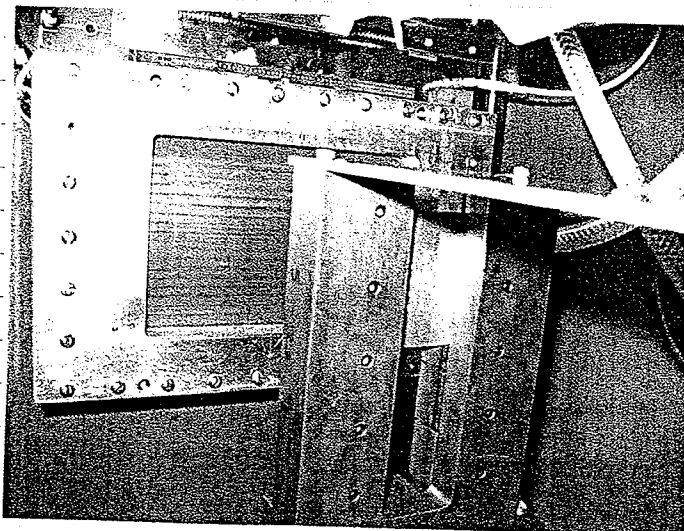
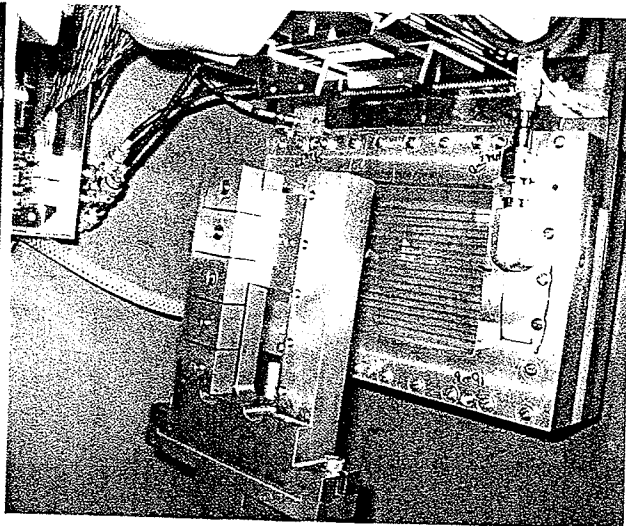
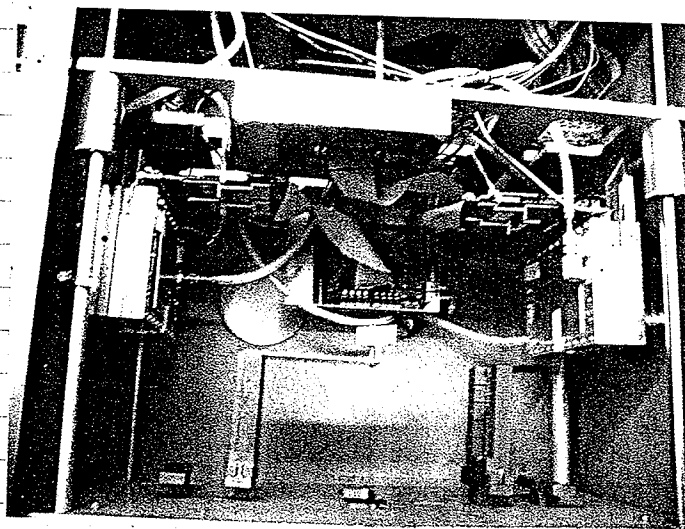
_____ " _____ 2 _____ " _____ : Top - North



TCRDC1 mask - Square size = 80mm



TCRDC2 mask - Distance between holes = 5mm



#76 10/06/2005 9:05 AM

- Main Utility Setup Groups View

Group 01

User

Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.80 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.10 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.44 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.50 V	1.56 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.96 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.18 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.86 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	2.94 uA	On	← +0.02 ^{MA} / uA	1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.86 uA	On		1.00s.0	

Run# 77	Start: 10:02 Stop: 10:06	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: target detector Target upsteam:	On shift: Mark Betty Marc-Jean
	Target downsteam: Si detector	
Comments: change mapping Spectel for target Si		

Centroid ^{12}Be beam $x = 7.94$ FWHM 2.93 Lassa
steps
 $y = 8.95$ FWHM 4.95

- 10:12 - A1900 start tuning the calibration beams
 CRDS are ~~not~~ being taken out.

Lassa leakage current

1 = 0.33 μA , 2 = 1.64 μA , 3 = 2.4 μA , 4 = 2.3 μA

transmission for ^{13}Be was measured
 as 35%

so 8.7 ^{14}Be per sec / per pA

as xFP $\rightarrow 3 \text{ s}^{-1} / \text{pA}$

now ^{13}Be rate at xPF was 1735 $\text{s}^{-1} / \text{pA}$

$$\frac{^{14}\text{Be}}{^{13}\text{Be}} = 0.0050$$

this would give 0.75 $\mu\text{mol s}^{-1}$ for the
 assumed 100% of energy on the ^{13}Be

$$179 \text{ day}^{-1}$$

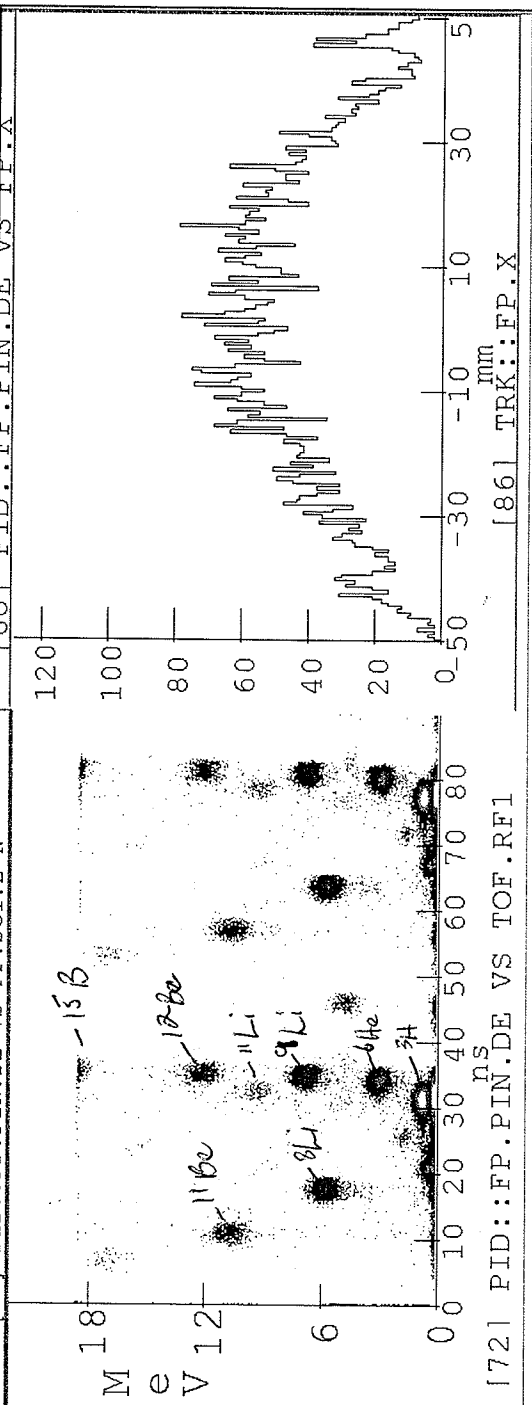
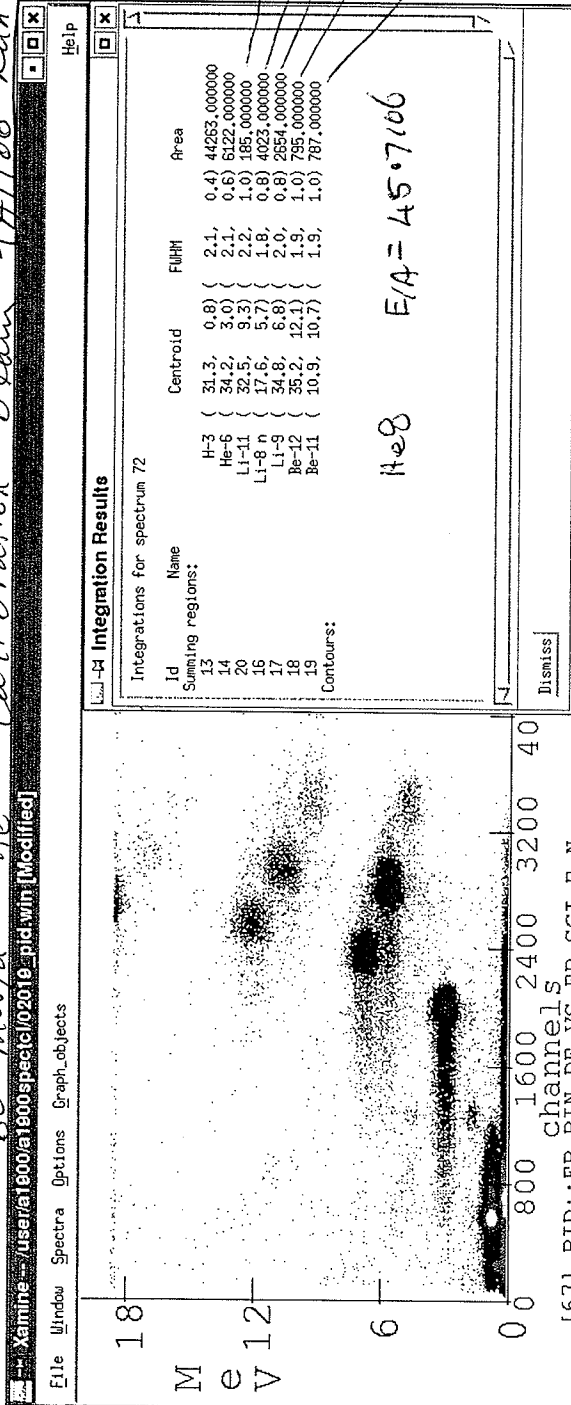
could go to 100 pA

$$\rightarrow 240 \text{ day}^{-1}$$

2x target $\rightarrow 480 \text{ day}^{-1}$

betty says $\frac{1}{2500}$ not $\frac{1}{500} \rightarrow 96 \text{ day}^{-1}$

80 MeV/c 6He Calibration Beam - A1900 Ran 3919



Integrations for spectrum 72

Id	Name	Centroid	FWHM	Area
13	H-3	(31.3, 0.8)	(2.1, 0.4)	44253.000000
14	He-6	(34.2, 3.0)	(2.1, 0.6)	5122.000000
20	Li-11	(32.5, 9.3)	(2.2, 1.0)	185.000000
16	Li-8 n	(17.6, 5.7)	(1.8, 0.8)	4023.000000
17	Li-9	(34.8, 6.8)	(2.0, 0.8)	2554.000000
18	Be-12	(35.2, 12.1)	(1.9, 1.0)	795.000000
19	Be-11	(10.9, 10.7)	(1.9, 1.0)	787.000000

Contours:

He8 E/A = 45.7106

79.6667 MeV/c
 20.0039
 54.086
 100.37
 80.0282
 80.1417
 84.717

Spectrum 88 X -49.75 Y 0.03 Counts 0

[86] TRK::FP.X

Geometry | J Zoom | Update All | Expand | Marker | Contour

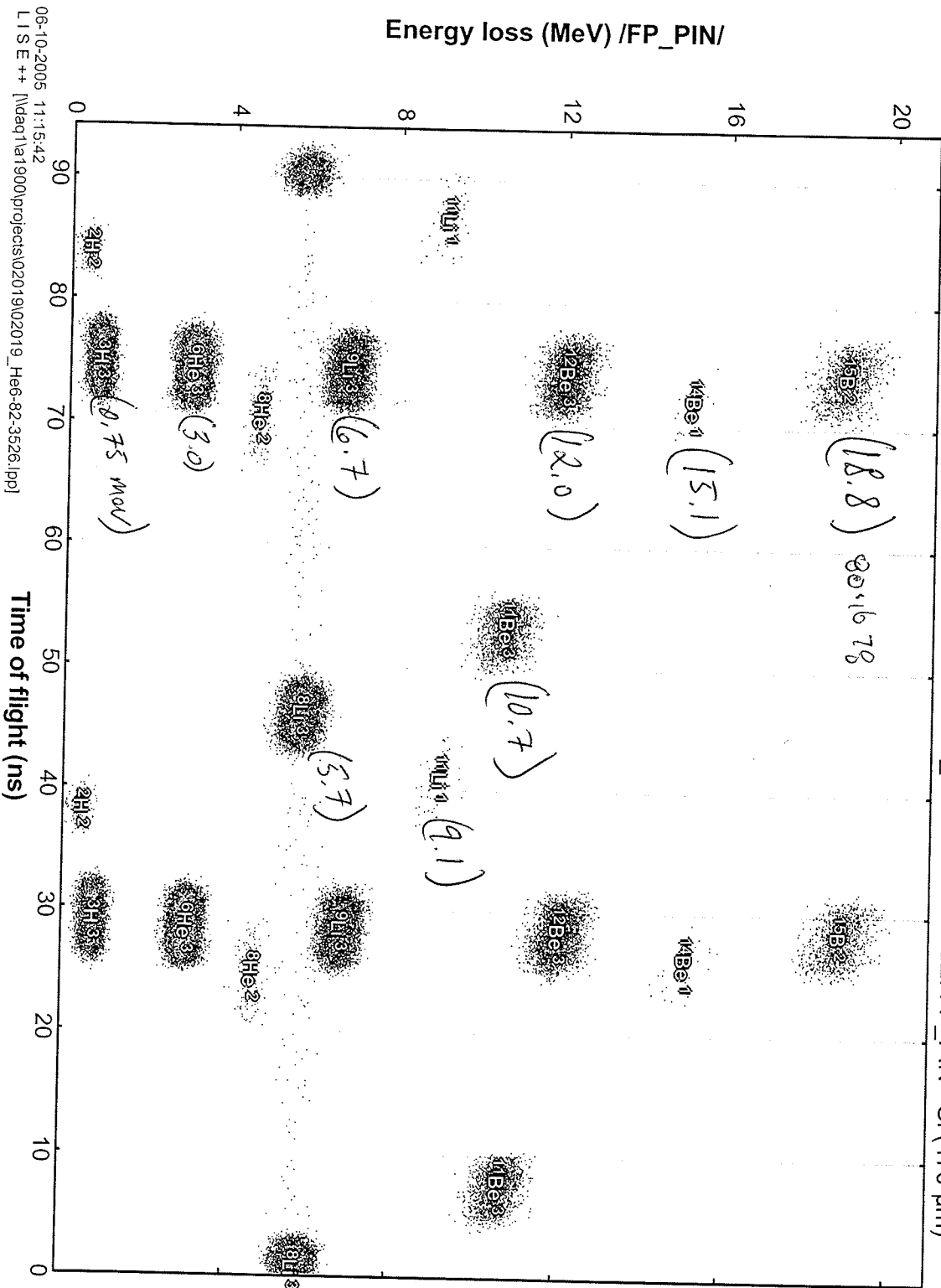
Display | Update Selected | UnExpand | Summing Region | Band

Display + | Info | Log | Help | Integrate | Contour

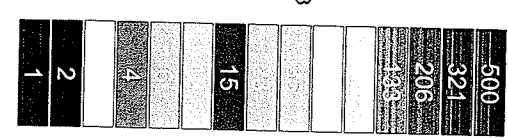
DE-TOT

^{180}O (120.0 MeV/u) + Be (3526 mg/cm²); Settings on 8He; Config: DDSDDMSMM
 dp/p=2.00%; Brho(Tm): 3.9578, 3.9578, 3.9578, 3.9578
 Start: Target; Stop: FP_PIN; ACQ_start: RF ** de: FP_PIN - Si (470 μm)

without charge states
 all reactions separ.



SUM
 6.000e+04
 Speed
 0 pps



80 Nov 17 6He

Run# 78	Start: 12:40	Date: 10/5/2005
Beam: • ¹² Be • ¹⁴ Be ⊙ mixed ³ He • p • source	Trigger: HIRA SINGLES	On shift: Bob Mark
	Target upstream: Target downstream: 12C 4mm	
Comments: 80mW/A bite + Friends		

Run #78 10/06/2005 12:05

- Main Utility Setup Groups View

Group 01	Channel Name	V0Set	I0Set	W0n	IM0n	Pw	Status	Trip	User #
Tow0Card15		210.00 V	6.00 uA	209.25 V	0.80 uA	On		1.00s.0	
Tow0Card12		250.00 V	6.00 uA	250.25 V	1.08 uA	On		1.00s.0	
Tow0Card9		190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
Tow0Card6		240.00 V	6.00 uA	239.75 V	3.48 uA	On		1.00s.0	
Tow1Card15		290.00 V	6.00 uA	289.50 V	1.56 uA	On		1.00s.0	
Tow1Card12		240.00 V	6.00 uA	239.50 V	1.96 uA	On		1.00s.0	
Tow1Card9		200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
Tow1Card6		295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
Tow2Card12		210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
Tow2Card9		250.00 V	5.00 uA	249.50 V	1.20 uA	On		1.00s.0	
Tow2Card6		250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3		350.00 V	6.00 uA	349.50 V	1.88 uA	On		1.00s.0	
Tow3Card15		210.00 V	6.00 uA	209.75 V	2.98 uA	On		1.00s.0	
Tow3Card12		200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9		120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
Tow3Card6		310.00 V	7.00 uA	309.25 V	3.88 uA	On		1.00s.0	

Run# 79	Start : 12:16 Stop: 12:23	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^6He • p • source 	Trigger: HiRA singles	On shift: Mark Betty Marc-Jan
	Target upsteam:	
Comments: 80 MeV/A ^6He + beam intensity fluctuates wildly according to scalars.		

Run# 80	Start : 12:33 Stop:	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^6He • p • source 	Trigger: HiRA singles	On shift: Mark Betty Marc-Jan Bob
	Target upsteam:	
Comments: 80 MeV/A ^6He		

Switched TARGET to Au 104 mg/cm²

Run# 81	Start: 12:52 Stop: 13:26	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ⁶He • p • source 	Trigger: <p>HiRA Singles</p> <hr/> Target upsteam: <p>Au 104 mg/cm²</p> Target downsteam:	On shift: <p>Mark Betsy Bob Marc-Jean</p>
Comments: 80 MeV/A ⁶ He		

Run# 82	Start: 13:26 Stop: 13:35	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ⁶He • p • source 	Trigger: <p>H. RA Singles</p> <hr/> Target upsteam: <p>Au 104 mg/cm²</p> Target downsteam:	On shift: <p>Mark Betsy Marc-Jean</p>
Comments: 80 MeV/A ⁶ He		

Run #82 10/06/2005 13:26

- Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	WMon	IMon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.25 V	0.80 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.10 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.50 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.50 V	1.56 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.96 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.20 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.25 V	1.88 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.00 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.88 uA	On		1.00s.0	

Run# 83,84,85	Start: 13:39 Stop:	Date: 10/6/2005
Beam: • ^{12}Be • ^{14}Be • mixed ^xHe • p • source	Trigger: H1RA Singles Target upsteam: Au 106 mg Target downsteam:	On shift: Mark Beltz Bob Marc Jan
Comments: 80 MeV/A ^6He 45 MeV/A ^8He		

DAQ
 Run crashed on Run 84, file not properly closed

User

#

Os.0

Os.0

Os.0

Os.0

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Os.0

Run# 86	Start: 14.23 Stop: 14.37	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Singles	On shift: Mark Betty Bob
	Target upsteam:	Bob
	Target downsteam: C 0.4mm	Marc-Jan
Comments: 80 MeV/A ^6He RF Tripped - Operators say S3 not secured(?)		

No one dared to have tried to enter S3

23 G bytes of data now

Run# 87	Start: 3:55 Stop:	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Singles	On shift: Mark Betty Bob
	Target upsteam:	Bob
	Target downsteam: C 0.4mm	Marc-Jan
Comments: 80 MeV/A ^6He		

Run 87 10/6/2005 16:05

- Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	WMon	IMon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.80 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.10 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.50 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.50 V	1.56 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.98 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.20 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.25 V	1.88 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.02 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.92 uA	On		1.00s.0	

Run# 88,89	Start : Stop: 5:40	Date: 10/5/2005
Beam: ● ^{12}Be ● ^{14}Be ● mixed ^xHe ● p ● source	Trigger: AIRA Si Singles Target upsteam: Target downsteam: ^{12}C ^xHe	On shift: Bob
Comments: playing with TRACKING detectors		

Run 90 10/6/05 18:51

- Main Utility Setup Groups View

User

Group 01

#	Channel Name	V0Set	I0Set	Wbn	IMbn	Pw	Status	Trip	#
	Tow0Card15	210.00 V	6.00 uA	209.50 V	0.80 uA	On		1.00s.0	
	Tow0Card12	250.00 V	6.00 uA	250.25 V	1.08 uA	On		1.00s.0	
	Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
	Tow0Card6	240.00 V	6.00 uA	240.00 V	3.50 uA	On		1.00s.0	
	Tow1Card15	290.00 V	6.00 uA	289.50 V	1.52 uA	On		1.00s.0	
	Tow1Card12	240.00 V	6.00 uA	239.50 V	1.94 uA	On		1.00s.0	
	Tow1Card9	200.00 V	6.00 uA	200.00 V	1.56 uA	On		1.00s.0	
	Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
	Tow2Card12	210.00 V	6.00 uA	210.00 V	0.74 uA	On		1.00s.0	
	Tow2Card9	250.00 V	5.00 uA	249.50 V	1.16 uA	On		1.00s.0	
	Tow2Card6	250.00 V	6.00 uA	249.50 V	1.48 uA	On		1.00s.0	
	Tow2Card3	350.00 V	6.00 uA	349.50 V	1.82 uA	On		1.00s.0	
	Tow3Card15	210.00 V	6.00 uA	209.75 V	3.06 uA	On		1.00s.0	
	Tow3Card12	200.00 V	6.00 uA	199.75 V	1.20 uA	On		1.00s.0	
	Tow3Card9	120.00 V	6.00 uA	119.75 V	0.96 uA	On		1.00s.0	
	Tow3Card6	310.00 V	7.00 uA	309.25 V	3.76 uA	On		1.00s.0	

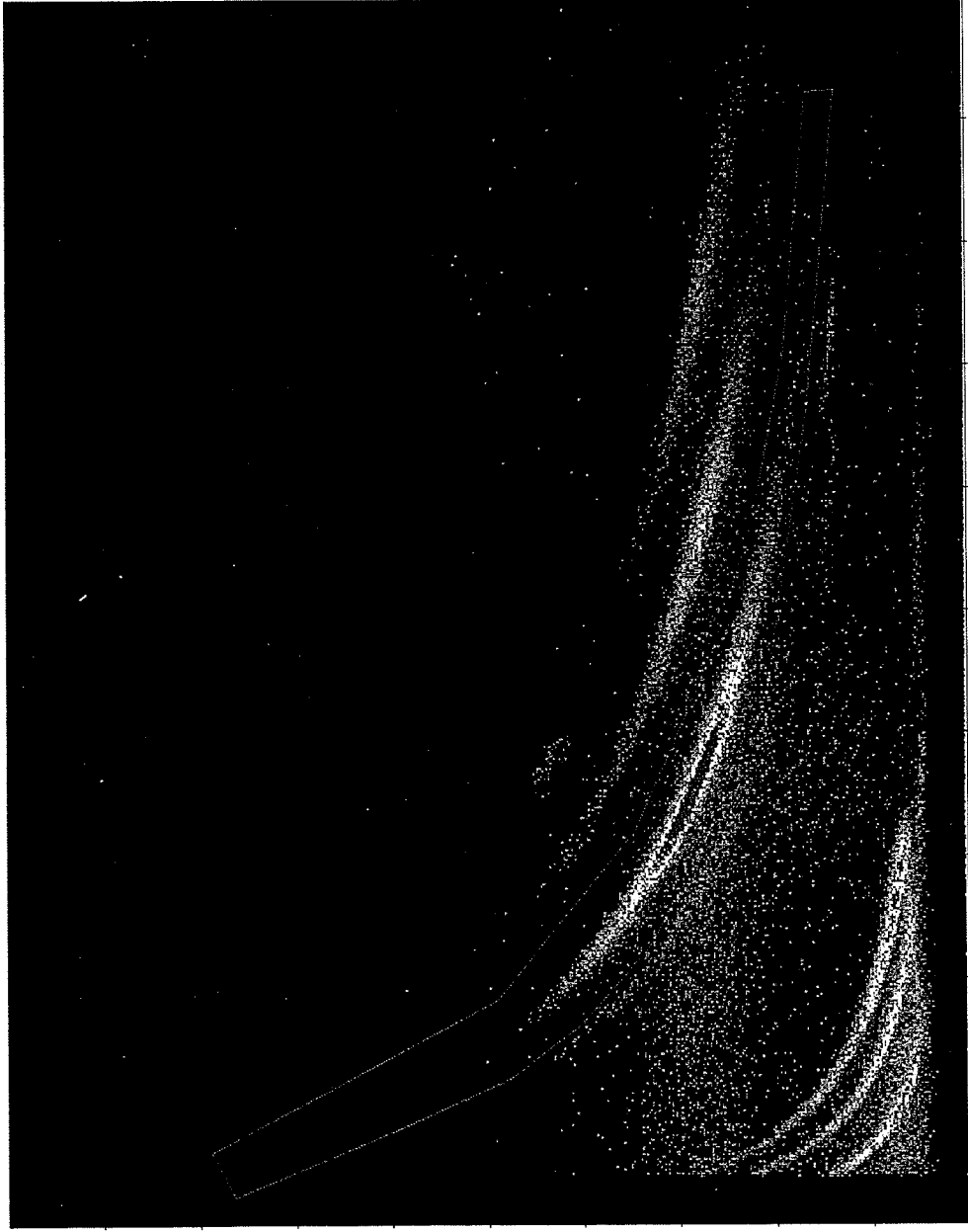
Display/Edit Group 01

LocEn V0 I0

T | CAEN SY252

Run# 90	Start : 9:00 pm	Date: 10/5/2005
Beam:	Trigger:	On shift:
<ul style="list-style-type: none"> ● ¹²Be ● ¹⁴Be ● mixed ⁴He ● p ● source 	Target upsteam: Target downsteam: ¹² C .4	Bob
Comments:		

Zambira - Asaan020109C:\urandba\pacibay\mri-llas\H18\p02020_esi_ev_pa2_wni [Mcdiffad]
 File Window Spectra Options Graph_Objects Help



0 50 100 150 200 250 300 350 400 450

[44] CAL.TELE05.EB.CSI3

Counts 0

Y 225

X 215

Spectrum 44

- Geometry
- Display
- Zoom
- Update All
- Update Selected
- Expand
- UnExpand
- Marker
- Summing Region
- Band
- Fit

Run# 91	Start: 21:25 Stop:	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ⁴He • p • source 	Trigger: MIRA singles	On shift: Andy Bob Carl Bill
	Target upsteam: Target downsteam: C	
Comments: Limited to attenuator 10 (min 3) due to noise on CRDCs which washes DA		

22⁴⁰ disk quota problem

Target Si IN

Run# 93	Start: Stop:	Date: 10/ /2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ⁴He • p • source 	Trigger: Target Si	On shift:
	Target upsteam: Target downsteam: Si Target	
Comments: CRDCs MARK IS IN. TARGET SILICON:		

Target Si in on

227.5 AM

Run# 94, 95	Start: 11:20 Stop:	Date: 10/ /2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed $^{\text{He}}$ • p • source 	Trigger: Target Si	On shift: Bob
	Target upstream: Target downstream: Target Si	
Comments: Mask CRDC 1 again.		

Run# 96	Start: 11:30 Stop:	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed $^{\text{He}}$ • p • source 	Trigger: Target Si	On shift: Bob
	Target upstream: Target downstream: Target Si	
Comments: Mask CRDC 2		

Run# 97, 98	Start : 12:00 Stop:	Date: 10/5/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: Hira 9i Singles	On shift: Bob -
Target upsteam:		
Target downsteam: 12C		
Comments: collecting data again 97 Crashed again. 98 continued.		

Raising thresholds of CRDE's

Run# 99	Start : 12:20 Stop: 01-16 #100-	Date: 10/_/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: Hira Singles	On shift: Bob
Target upsteam:		
Target downsteam: 12C		
Comments:		

CRDE are 93% efficient

Run #100 - empty
run 101, 102 bad

- Main Utility Setup Groups View

Group 01

User

Channel Name	V0Set	I0Set	W0n	IM0n	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.60 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.58 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.00 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.60 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.28 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.22 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.90 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.14 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.24 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	119.75 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.96 uA	On		1.00s.0	

Display/Edit Group 01

LocEn V0 10

T | CAEN SY252

Run# <i>100</i>	Start : <i>01-19</i>	Date: 10/___/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger:	On shift:
	Target upstream:	
	Target downstream: <i>12C</i>	
Comments: <i>all runs 100-109 are empty</i>		

madout problem, att. #10 now

if was 3 even we have att. 30

the madout problem is still

low CRPC is off, it looks no

DAQ problem.

Run# 109 att 10	Start : Stop:	Date: 10/___/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: M/Ra silicon	On shift:
Target upstream:		
Target downstream: 12C		
Comments: NO CRPC!		

Run 100 att. #3

Run# 110	Start : 2:30 48 Stop: 3:48	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Si single	On shift: Sylvie
	Target upsteam: Target downsteam: ^{12}C	
Comments: No CRDC. Attenuation 3.		

Run# 111	Start : 3:48 Stop: 4:31	Date: 10/ /2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Si single	On shift: Sylvie
	Target upsteam: Target downsteam: ^{12}C (0.4 mm)	
Comments: No trigger → run ended NO CRDC		

Run III 10/7/05 4:17

Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	W0n	IM0n	Rw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.80 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.10 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.64 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.58 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	1.98 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.18 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.84 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.16 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.86 uA	On		1.00s.0	

Run# 112	Start : 4:31 Stop: 4:51	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HIRA B single	On shift: Sylvie
	Target upsteam: Target downstream: ¹² C (0.4mm)	
Comments: NO CRDC		

TARGET CHANGED TO THICK POLY.

Run# 113	Start : 5:03 Stop: 6:02	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HIRA 51 single	On shift: Sylvie
	Target upsteam: Target downsteam: CH ₂ (1mm)	
Comments: No CRDC Route: XFP ~ 220000; OBS ~ 140000; Live trigger ~ 420 No trigger at the end of run.		

Run# 114	Start : 6:02 Stop: 6:35	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HIRA 51 single	On shift: Sylvie
	Target upsteam: Target downsteam: CH ₂ (1mm)	
Comments: No CRDC Run paused. No trigger. Pass the higher limit in XFP + Obj => alert on Scalers.		

#114

10/7/05

6:30

- Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	W0n	IM0n	Rw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.64 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.60 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.02 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.60 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.28 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.22 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.90 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.18 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.24 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.96 uA	On		1.00s.0	

Run# 115	Start: 6:35 Stop: 7:30	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HIRA Si single	On shift: S'g'v'ic
	Target upsteam: Target downsteam: CH2 (1mm)	
Comments: No CRDC		

Run# 116	Start : 7:30 Stop : 8:05	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HiRA Si: single	On shift: Mark Marc-Jen
	Target upsteam: Target downstream: CH2 Inms	
Comments: No SRDCS		

Run # 116 10/7/2005 7:30 AM
 - Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	W0n	IM0n	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.66 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.60 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.02 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.62 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.28 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.22 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.54 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.90 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.20 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.24 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.98 uA	On		1.00s.0	

8:AM 10-7-2005

Changed beam to ${}^6\text{He}$ 50 MeV/A $B_p = 3.1096\text{Tm}$
for calibration

Changed Target to ${}^{12}\text{C}$ 0.4 mm downstream

Run# 117	Start : 8:50 Stop:	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ${}^{12}\text{Be}$ • ${}^{14}\text{Be}$ • mixed ${}^x\text{He}$ • p • source 	Trigger: HiRA Si Singles	On shift: Mark Marc-Jean Bob.
	Target upsteam: Target downsteam: ${}^{12}\text{C}$ 0.4 mm	
Comments: 50 MeV/A ${}^6\text{He}$. 2nd Calibration Setting		

Run #117 : 10/7/2005 : 8:59

- Main Utility Setup Groups View

User

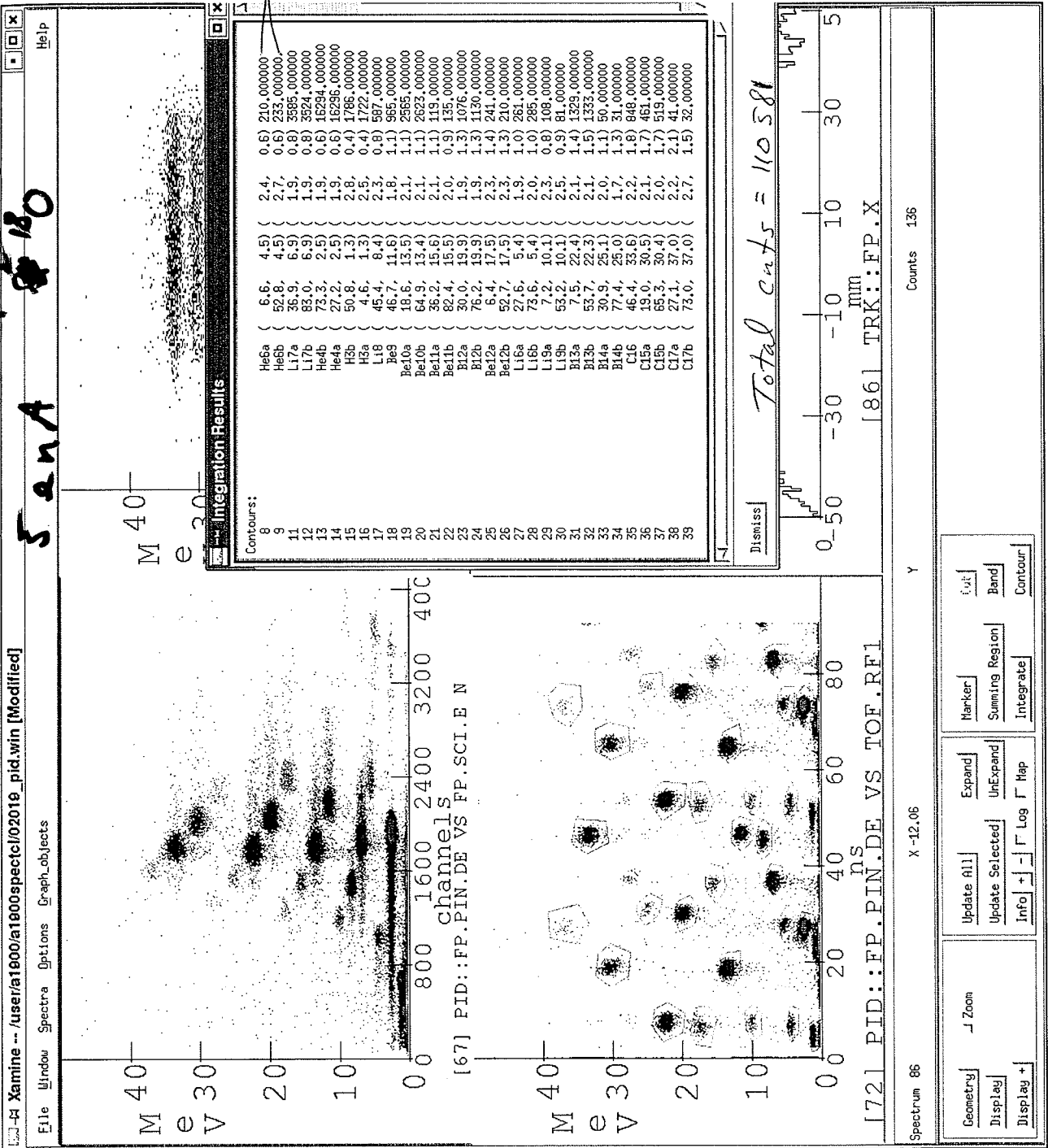
Group 01

Channel Name	V0Set	I0Set	W0n	IM0n	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.66 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.62 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.02 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.62 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.28 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.22 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.54 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.90 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.20 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.24 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.02 uA	On		1.00s.0	

Run# 118	Start : 9:20 Stop: 9:31	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA Si Singles	On shift: Mark Marc-Jan Betty Bob.
	Target upsteam:	
	Target downsteam: ^{12}C 0.4 mm	
Comments: Moved a wedge in A1900 Bg = 3.3026 before wedge Readout problem scalars go to zero periodically 2nd calibration		

Run# 119	Start : 9:31 Stop:	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA Si Singles	On shift: Mark Marc-Jan Betty Bob
	Target upsteam:	
	Target downsteam: ^{12}C 0.4 mm	
Comments: E/A > 50 MeV ^6He 2nd calibration		

2nd Calibration
 A1900 Run 3921 ~~3920~~
 5 and 180

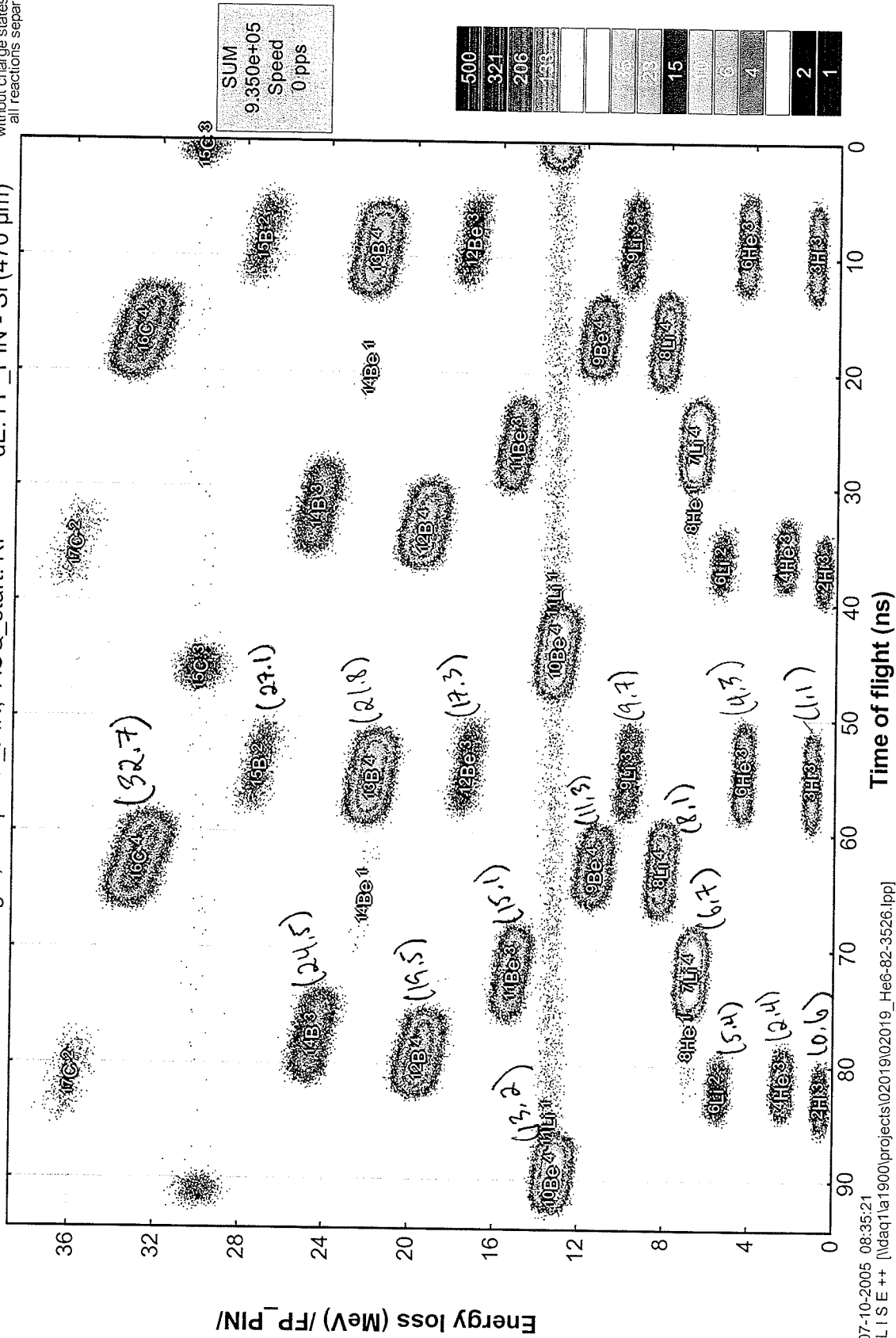


2nd Calibration setting ¹⁸O-TOF

¹⁸O (120.0 MeV/u) + Be (3526 mg/cm²); Settings on ⁶He; Config: DSDSDMSMMM
dp/p=2.00%; Brho(Tm): 3.1046, 3.1046, 3.1046, 3.1046

Start: Target; Stop: FP_PIN; ACQ_start: RF ** dE: FP_PIN - Si (470 μm)

without charge states
all reactions separ.



- Changed beam to ^8He 27.34 MeV/A

Run# 120	Start: 10:01 Stop: 2	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^8He • p • source 	Trigger: <p>H.R.A S: Singles</p>	On shift: <p>Mark Marc-Jan Bob Betty</p>
	Target upstream:	
	Target downstream: <p>RC 0.9 mm</p>	
Comments: changed beam to ^8He 27.34 MeV/A 2nd Calibration Setty		

Loss leakage

1 = .39, 2 = 1.68, 3 = 2.45, 4 = 2.3

changed Target to Arg upstream

Run# 121	Start: 10:18 Stop:	Date: 10/7/2005
Beam: • ¹² Be • ¹⁴ Be • mixed ⁸ He • p • source	Trigger: CLARA S: Single Target upstream: Au Target downstream:	On shift: Mark Marc-Jean Bob Belty

Comments: changed to ⁸He + Au upstream
27.34 MeV/A 2nd calibration setting

A1900 settings ⁸He beam

A1900 "Print07Oct05_10h04.txt" Friday 10:04:39 2005-10-07 A1900
Moe V3 *** RUN 120 27.34 MeV calib beam ***
Expt: 02019 "Resonance spect in ¹⁴Be and ¹²Be" [R.J. Charity] Line: S800 [8]
Beam: 18 O 3+ 10.91 MeV/nuc (K500) 8+ 120.00 MeV/nuc (K1200)
<Att 3> ECR, Apertures: RTECR 50.0; 50.0; 15.0 mm RHVBI: 22.6200 kV
K500 a,b: 626 A, 556 A K1200: 686 A, -71 A RF: 21.82592 MHz
A1900 Optics: G19S3V13_20x20Focus60x30HiRA.data

	Rigidity	Field	Radius	(live)	Difference (Field*Radius)
Seg 0:	3.66970 Tm				
Seg 1:	3.47910 Tm	1.12278 T	3.09882 m	3.09866 m	0.00513 % (3.47928 Tm)
Seg 2:	3.47910 Tm	1.12176 T	3.10148 m	3.10147 m	0.00045 % (3.47912 Tm)
Seg 3:	3.10460 Tm	1.00277 T	3.09611 m	3.09601 m	0.00308 % (3.10470 Tm)
Seg 4:	3.10460 Tm	1.00257 T	3.09663 m	3.09665 m	-0.00055 % (3.10458 Tm)
Seg 5:	3.10460 Tm				
Seg 6:	3.10460 Tm				
Seg 7:	3.10460 Tm				
Seg 8:	2.45960 Tm				
Z108DS	0.44390 T	6.99562 m	6.99392 m	0.02429 %	
D140DS	0.00000 T	3.14657 m	0.00000 m	100.00000 %	
D165DS	0.32596 T	9.52875 m	9.52447 m	0.04489 %	
I200DS	0.98699 T	3.14290 m	3.14552 m	-0.08340 %	
I205DS	0.98908 T	3.14225 m	3.13888 m	0.10747 %	
I223DS	1.02475 T	3.02915 m	3.02962 m	-0.01544 %	
I228DS	0.96847 T	3.20433 m	3.20567 m	-0.04181 %	
I265DS	0.00000 T	2.80280 m	0.00000 m	100.00000 %	
I269DS	0.00000 T	2.80280 m	0.00000 m	100.00000 %	

Z001TL: out, Z013TL: out; Z014TL out
Z015TL: Be 3526, Z016TL out
Z030BC Beam Stop: -127.41 mm
Z037L,R: -16.00, 15.97 mm; Z037DC: out
Z057MS: 1 pct, Z061MS: out
Z059DC: out, Z062SC: out, Z059TL: Al 1050
Z082 XC,G,YG: 0.16, 195.80, 195.95 mm Z082TL: out
Z101DC: out, Z102DC: out; Z103DC: out, Z105SC: out
Z104TL: out, Slits: nothing installed; PPACs: gas on
B110 Cent,Gap: -0.03, 0.88 mm; D110 1.49, 10.00 mm F110 0.05, 0.20
B110DC: out, D110DC: out, D111DC: out, F110DC: out
Slits: I181 XC,G,YC,G: 0.76, 98.93; -0.00, 98.39
I187: out, I188: out, I189: out, I190: out
I213: out, I214: out, I215: out, I216: out
I214DC Detector Drive out

changed target to ^{12}C 0.9 mm downstream
 changed beam to α 70 MeV/A

Run# 122	Start: 11:03 Stop: 11:33	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^4He • p • source 	Trigger: HiRA Si Singles	On shift: Mark Marc-Jan Bob Betty
	Target upstream:	
	Target downstream: ^{12}C 0.9 mm	
Comments: $B_p = 2.3922$ A1500 70 MeV/A α beam. 3rd Calibration setting		

Run 122 A1900 settings.

A1900 "Print07Oct05_11h07.txt" Friday 11:07:41 2005-10-07 A1900
 Moe V3 *** 122 ***

Expt: 02019 "Resonance spect in 14Be and 12Be" [R.J. Charity] Line: S800 [8]

Beam: 18 O 3+ 10.91 MeV/nuc (K500) 8+ 120.00 MeV/nuc (K1200)

<Att 3k> ECR, Apertures: RTECR 50.0; 50.0; 15.0 mm RHVBI: 22.6200 kV

K500 a,b: 626 A, 556 A K1200: 686 A, -71 A RF: 21.82592 MHz

A1900 Optics: G19S3V13_20x20Focus60x30HiRA.data

Seg	Rigidity	Field	Radius	(live)	Difference (Field*Radius)
Seg 0:	3.66970 Tm				
Seg 1:	2.39220 Tm	0.77197 T	3.09882 m	3.09881 m	0.00026 % (2.39221 Tm)
Seg 2:	2.39220 Tm	0.77125 T	3.10148 m	3.10171 m	-0.00734 % (2.39202 Tm)
Seg 3:	2.39220 Tm	0.77262 T	3.09611 m	3.09621 m	-0.00323 % (2.39212 Tm)
Seg 4:	2.39220 Tm	0.77256 T	3.09663 m	3.09646 m	0.00529 % (2.39233 Tm)
Seg 5:	2.39220 Tm				
Seg 6:	2.39220 Tm				
Seg 7:	2.39220 Tm				
Seg 8:	2.45960 Tm				
Z108DS		0.34390 T	6.99562 m	6.95609 m	0.56820 %
D140DS		0.00000 T	3.14657 m	0.00000 m	100.00000 %
D165DS		0.25088 T	9.53433 m	9.53532 m	-0.01037 %
I200DS		0.76108 T	3.14290 m	3.14316 m	-0.00843 %
I205DS		0.76090 T	3.14225 m	3.14391 m	-0.05275 %
I223DS		0.78999 T	3.02915 m	3.02814 m	0.03334 %
I228DS		0.74629 T	3.20433 m	3.20546 m	-0.03500 %
I265DS		0.00000 T	2.80280 m	0.00000 m	100.00000 %
I269DS		0.00000 T	2.80280 m	0.00000 m	100.00000 %

Z001TL: out, Z013TL: out; Z014TL out

Z015TL: Be 3526, Z016TL out

Z030BC Beam Stop: -127.41 mm

Z037L,R: -16.00, 15.97 mm; Z037DC: out

Z057MS: 1 pct, Z061MS: out

Z059DC: out, Z062SC: out, Z059TL: out

Z082 XC,G,YG: 0.16, 195.80, 196.06 mm Z082TL: out

Z101DC: out, Z102DC: out; Z103DC: out, Z105SC: out

Z104TL: out, Slits: nothing installed; PPACs: gas on

B110 Cent,Gap: -0.03, 0.88 mm; D110 1.49, 10.00 mm F110 0.05, 0.20

B110DC: out, D110DC: out, D111DC: out, F110DC: out

Slits: I181 XC,G,YC,G: 0.76, 98.93; -0.00, 98.39

I187: out, I188: out, I189: out, I190: out

I213: out, I214: out, I215: out, I216: out

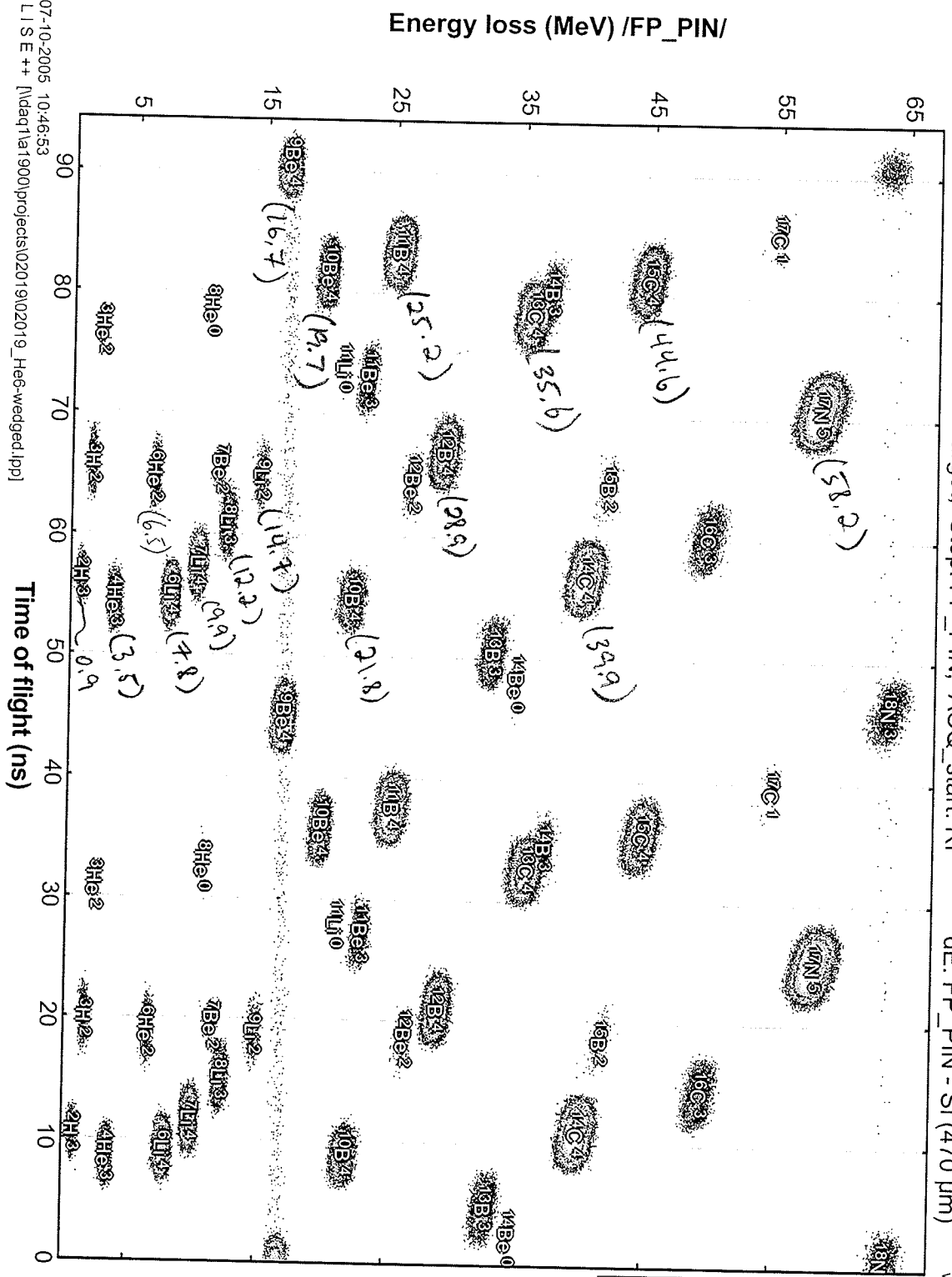
I214DC Detector Drive: out

3rd Calibration *soft*

DE-TOR

¹⁸O (120.0 MeV/u) + Be (3526 mg/cm²); Settings on ⁶He; Config: DDSSDMSMMM
 dp/p=1.00%; Brho(Tm): 2.3922, 2.3922, 2.3922, 2.3922
 Start: Target; Stop: FP_PIN; ACO_start: RF ** DE: FP_PIN - Si (470 μm)

without charge states
 all reactions separ.



SUM
 6,800e+05
 Speed
 0 pps

500
321
206
139
15
6
4
2
1

07-10-2005 10:46:53
 L I S E ++ [lvdag1at1900]projects\02019\02019_He6-wedged.lpp]

Time of flight (ns)

Energy loss (MeV) /FP_PIN/

3rd Calibration with A1900 Run 3928 Gain 6 on PIN

File Window Spectra Options Graph Objects Help

14- Integration Results

Summing Region 021 (34.1, 14.5) (59.4, 37.9) 131213.000000

21	Contours:	(7.2, 3.6)	(0.6) 20280.000000
14	He4a	(53.4, 3.6)	(2.2) 20405.000000
13	He4b	(53.4, 7.9)	(2.4) 1084.000000
28	L16a	(7.1, 8.0)	(2.3) 1077.000000
12	L17a	(50.0, 10.2)	(2.5) 1281.000000
11	Re9a	(3.9, 10.1)	(2.3) 1285.000000
44	Re9b	(15.8, 17.1)	(2.4) 1160.000000
45	He2a	(63.0, 17.1)	(2.4) 1073.000000
46	He2b	(50.4, 0.9)	(2.6) 1972.000000
47	He2c	(4.3, 1.0)	(2.5) 2034.000000
8	He6a	(40.3, 6.6)	(3.5) 36.000000
9	He6b	(85.5, 6.6)	(3.9) 27.000000
17	L18	(44.7, 12.1)	(3.2) 211.000000
16	H5a	(38.5, 1.8)	(3.1) 402.000000
15	H5b	(84.5, 1.8)	(2.0) 324.000000
48	He3a	(31.8, 2.4)	(1.9) 375.000000
49	He3b	(78.0, 2.4)	(2.6) 672.000000
19	Pe10a	(25.4, 20.1)	(2.7) 895.000000
20	Pe10b	(71.5, 20.1)	(2.7) 895.000000
50	B11a	(24.5, 25.9)	(2.4) 5190.000000
51	B11b	(70.7, 25.9)	(2.4) 5190.000000
52	B10a	(54.0, 22.3)	(2.3) 1.4535.000000
53	B10b	(86.8, 22.3)	(2.2) 1.61028.000000
24	B12a	(40.7, 23.7)	(2.5) 1.8334.000000
23	B12b	(54.5, 32.4)	(2.9) 1.8334.000000
32	B13a	(7.7, 32.3)	(3.6) 2.1353.000000
31	B13b	(29.7, 36.5)	(2.4) 1.94750.000000
54	C13a	(75.8, 36.5)	(2.3) 1.94861.000000
55	C13b	(51.1, 41.0)	(2.5) 2.0894.000000
56	C14a	(4.9, 45.9)	(2.5) 1.5722.000000
57	C14b	(26.0, 45.9)	(2.7) 2.0744.000000
37	C15a	(72.1, 45.9)	(2.7) 2.0744.000000
36	C15b	(72.1, 45.9)	(2.7) 2.0744.000000

Dismiss

[67] PID::FP.PIN.DE VS FP.SCI.E.N

[72] PID::FP.PIN.DE VS TOF.RF1

Spectrum 72 X 75.43 Y 0.03 Counts 0

Geometry - Zoom Display +

Update All Expand UnExpand

Update Selected Info + - Log Hap

Marker Summing Region Integrate

Out Band Contour

2 0 10 20 30 40 50 60 70 80 90

2 0 10 20 30 40 50 60 70 80 90

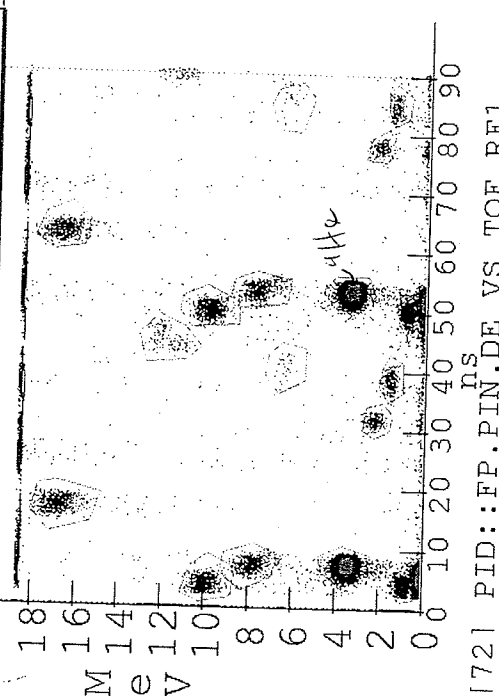
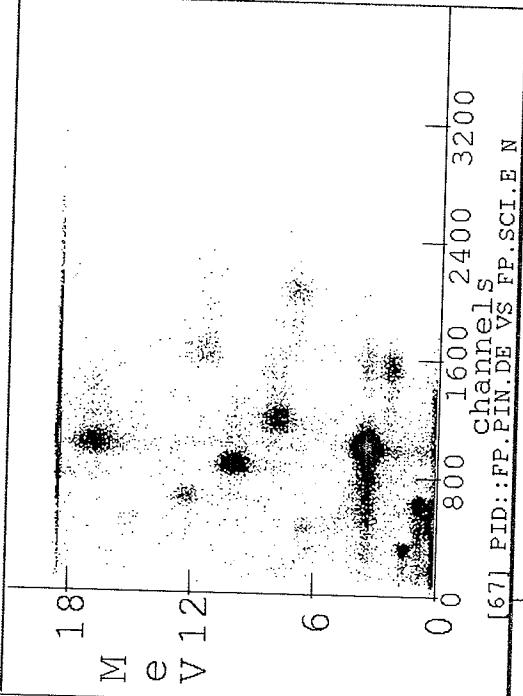
[[11]] PID::FP.PIN.DE VS TOF.RF1!!

3rd Calibration selfy

Run 3923 PIN Gain 7

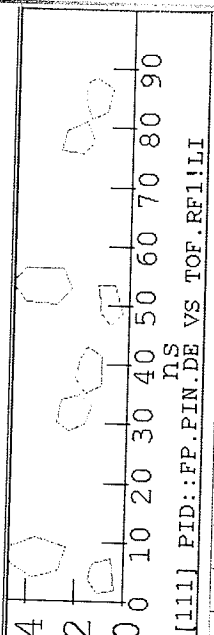
Xamine -- /user/a1900/a1900spectr/02010_pid.win [Modified]

File Window Spectra Options Graph Objects



14- r/enA

Integrations for spectrum 72				
Id	Name	Centroid	FWHM	Area
Summing regions: Summing Region 021 (38.5, 10.6) (62.7, 19.2) 106041.000000				
Contours:				
14	He4a	(7.2, 3.4)	(2.2, 0.6)	13480.000000
13	He4b	(53.4, 3.5)	(2.2, 0.6)	15300.000000
28	Li6a	(53.5, 7.7)	(2.4, 1.1)	688.000000
27	Li6b	(7.1, 7.6)	(2.5, 1.0)	687.000000
12	Li7a	(50.1, 9.5)	(2.4, 0.9)	894.000000
11	Li7b	(4.0, 9.9)	(2.4, 0.9)	844.000000
44	Be9a	(16.8, 16.8)	(2.3, 1.0)	732.000000
45	Be9b	(63.0, 16.8)	(2.3, 1.0)	732.000000
46	He2a	(50.2, 0.9)	(2.6, 0.4)	1204.000000
47	He2b	(40.7, 6.5)	(2.2, 0.4)	1071.000000
8	He6a	(85.6, 6.5)	(3.6, 0.6)	34.000000
9	He6b	(44.9, 11.9)	(3.6, 0.7)	25.000000
17	Li8	(38.7, 1.6)	(3.1, 1.3)	135.000000
16	He3a	(84.7, 1.6)	(3.1, 0.4)	282.000000
15	He3b	(77.9, 2.3)	(1.9, 0.5)	246.000000
48	He3a	(31.9, 2.3)	(1.8, 0.6)	252.000000
49	He3a	(31.9, 2.3)	(1.8, 0.6)	252.000000



[111] PID:::FP.PIN.DE VS TOF.RF1.LI

Run# 123	Start: 11:51 Stop:	Date: 10/21/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 30 MeV/A	Trigger: MIRA Si sm	On shift: Mark Marc-Jan Bob Betty
	Target upstream: Target downstream: ¹² C 0.4 mm	
Comments: ⁶ He 30 MeV/A 3rd Calibration setting		

- Main Utility Setup Groups View

Group 01	Channel Name	V0Set	I0Set	WMon	IMon	Rw	Status	Trip	User #
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0		
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0		
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0		
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.66 uA	On		1.00s.0		
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.62 uA	On		1.00s.0		
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.02 uA	On		1.00s.0		
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.64 uA	On		1.00s.0		
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.28 uA	On		1.00s.0		
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0		
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.22 uA	On		1.00s.0		
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.54 uA	On		1.00s.0		
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.92 uA	On		1.00s.0		
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.24 uA	On		1.00s.0		
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.24 uA	On		1.00s.0		
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0		
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.06 uA	On		1.00s.0		

Run# 124	Start : 12:05 Stop: 13:20	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Si	On shift: BOB MARRA
	Target upsteam: Target downstream: ^{12}C	
Comments: ^4He @ 50 MeV/A $B_p = 2.0646 \text{ Tm}$ 4th calibration setting		

Run# 125	Start : 13:23 Stop:	Date: 10/__/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Si	On shift: Mark Marc-Jean Bob Betty
	Target upsteam: Target downstream: ^{12}C	
Comments: ^4He @ 50 MeV/A 4th setting		

4th setting

A1900 Run 3925

~1eA

50 mag/μ 4He

Xamine -- /user/a1900/a1900spectcl/r3924_pid.win [Modified]

File Window Spectra Options Graph_objects Help

Integration Results

Integrations for spectrum 72

Id	Name	Centroid	FWHM	Area
Summing regions:				
21	Summing Region 021	(34.9, 20.7)	(61.8, 44.0)	71483.000000
Contours:				
11	Li7a	(40.0, 12.8)	(2.9, 0.8)	635.000000
12	Li7b	(86.2, 12.8)	(3.0, 1.0)	605.000000
13	He4a	(52.3, 4.5)	(2.6, 0.6)	11321.000000
14	He4a	(6.1, 4.5)	(2.6, 0.6)	11170.000000
28	Li6b	(52.1, 10.0)	(2.6, 1.0)	616.000000
27	Li6a	(5.9, 10.1)	(2.7, 1.0)	617.000000
58	Be7b	(49.2, 14.7)	(2.3, 1.1)	245.000000
59	Be7a	(3.3, 14.7)	(1.8, 1.0)	201.000000
60	Li8a	(26.9, 15.9)	(3.7, 1.0)	67.000000
61	Li8b	(73.1, 16.0)	(3.3, 1.0)	54.000000
45	Be9b	(55.2, 21.7)	(2.8, 1.3)	606.000000
44	Be9a	(8.9, 21.7)	(2.9, 1.3)	590.000000
20	Be10b	(57.2, 25.6)	(3.1, 1.2)	279.000000
19	Be10a	(11.0, 25.6)	(3.1, 1.3)	284.000000
52	B10a	(6.5, 28.2)	(2.5, 1.5)	851.000000
53	B10b	(52.7, 28.2)	(2.7, 1.6)	844.000000
62	C12a	(7.1, 40.7)	(2.6, 1.9)	2562.000000
63	C12b	(53.3, 40.7)	(2.6, 2.0)	2598.000000
23	B12a	(28.9, 38.0)	(3.2, 1.6)	418.000000
24	B12b	(74.9, 37.9)	(3.4, 1.8)	488.000000

Dismiss

[67] PID::FP.PIN.DE VS FP.SCI.E N

[72] PID::FP.PIN.DE VS TOF.RF1

[111] PID::FP.PIN.DE VS TOF.RF1!LI

Spectrum 72 X 78.83 Y 0.03 Counts 0

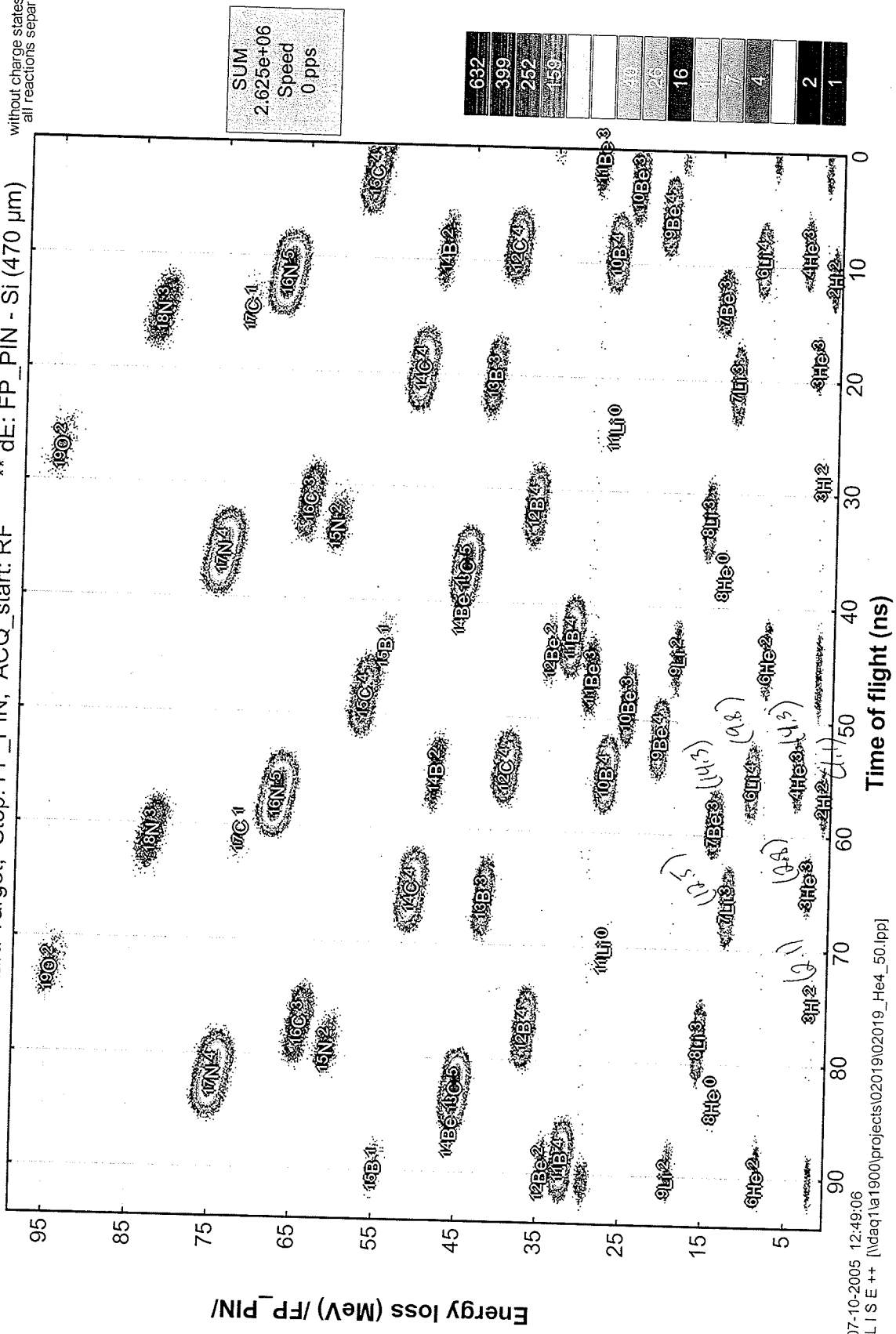
Geometry | Z | Zoom | Update All | Expand | Marker | Contour
 Display | Update Selected | UnExpand | Summing Region | Band
 Display + | Info | + | - | Log | Map | Integrate

4th setting

dE-TOF

^{18}O (120.6 MeV/u) + Be (3526 mg/cm²); Settings on ^4He ; Config: DDSDDMSMMM
 dp/p=1.00%; Brho(Tm): 2.0646, 2.0646, 2.0646, 2.0646
 Start: Target; Stop: FP_PIN; ACQ_start: RF ** dE: FP_PIN - Si (470 μm)

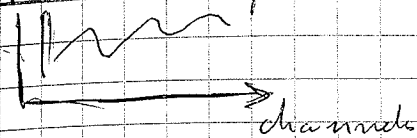
without charge states
all reactions separ.



SUM
 2.625e+06
 Speed
 0 pps

632
399
252
159
16
4
2
1

Noticed a problem with the CSI ~~Backend~~ ADCs



Run# 126	Start : 2:19 PM Stop: 2:39	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA Si Singles	On shift: Mark Marc-Jan Betty
	Target upstream: Target downstream: ^{12}C	
Comments: ^4He @ 50 MeV/A ^{12}C , HiRA Si		

Changed target to ^{12}C 0.5 mm upstream forward

Run# 127 , 128	Start : 2:39 PM Stop: 3:06 PM	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA Singles	On shift: Mark Marc-Jan Betty
	Target upstream: ^{12}C 0.5 mm Target downstream:	
Comments: ^4He @ 50 MeV/A ^{12}C 0.5 <u>upstream</u> <u>forward</u>		

Run# 128 10/7/2005 15:18

Main Utility Setup Groups View

Group 01

Channel Name	V0Set	I0Set	WMon	IMon	Pw	Status	Trip	User #
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.66 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.64 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.06 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.64 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.28 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.78 uA	On		1.00s.0	
Tow2Card9	250.00 V	5.00 uA	249.50 V	1.22 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.54 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.94 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.30 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.24 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	1.00 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.06 uA	On		1.00s.0	

- changed target to ^{12}C 0.9 mm forward downstream
- changed beam to ^4He 40 MeV/A B.g. = 1.8418

Run# 129	Start : 3:40 Stop : 4:05	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA & Singles	On shift: Mark Marc-Jean Bob Betty
	Target upstream: Target downstream: ^{12}C 0.9 mm	
Comments: α & ^4He 40 MeV/A beam not well centered 6 $q=37$ MeV/A ^3He		

User
0s.0
0s.0
0s.0
0s.0
0s.0
0s.0
0s.0
0s.0
0s.0
0s.0
0s.0
0s.0

5th Settings

Xamine -- /user/at1800/a1800spectr/r3924_pid.win [Modified]

File Window Spectra Options Graph_objects Help

M 40 - RUN 3926
e 30 - CALIB 4th C work
V

Integration Results

Integrations for spectrum 72

Id	Name	Centroid	FWHM	Area
21	Summing Region 021	(32.4, 1.8)	(58.4,	8.7) 110895.000000
14	He4a	(10.0,	5.2)	(0.6) 5067.000000
13	He4b	(56.2,	2.9)	(0.5) 5174.000000
49	He3a	(13.0,	3.3)	(0.5) 4522.000000
48	He3b	(59.2,	3.3)	(0.5) 4504.000000
16	H3a	(36.1,	2.4)	(0.3) 431.000000
15	H3b	(82.1,	2.4)	(0.3) 427.000000
27	Li6a	(9.5,	11.8)	(0.3) 354.000000
26	Li6b	(55.8,	11.8)	(3.0) 1.0) 353.000000
98	Be7a	(12.8,	17.2)	(3.2) 1.3) 832.000000
99	Be7b	(58.7,	17.1)	(2.6) 1.2) 790.000000
51	Li7a	(36.1,	15.2)	(3.2) 0.9) 115.000000
12	Li7b	(82.0,	15.2)	(3.3) 0.9) 127.000000

Summing regions:
Contours:

[67] PID::FP.PIN.DE VS FP.SCI.E.N

[72] PID::FP.PIN.DE VS TOF.RF1

Spectrum 72 X 40.89 Y 0.03

Counts 0

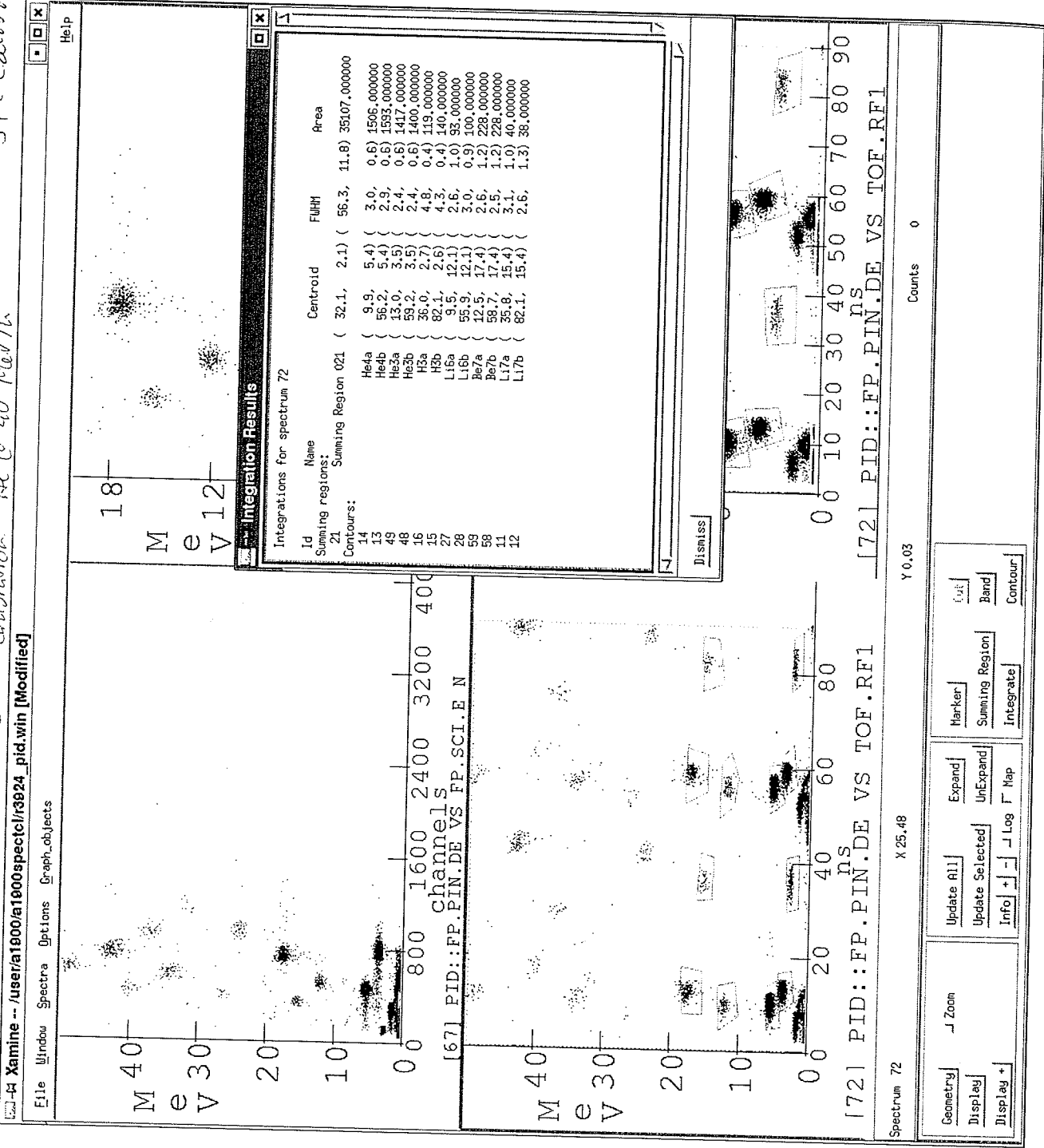
Geometry Zoom
Display
Display +

Update All Expand UnExpand
Update Selected Info + - Log Hap

Marker Summing Region Integrate
Cont Contour

3He = 69.37 MeV IA
 3H = 17.8199
 2H = 39.504

RUN 3927 Calibration file @ 40 Rev 16 5th Calibration setting



Xamine -- /user/a1900/a1900spectol/r3924_pid.win [Modified]

File Window Spectra Options Graph_objects Help

M 40
e 30
V 20
10
00

800 1600 2400 3200 4000
channels
[67] PID::FP.PIN.DE VS FP.SCI.E N

M 40
e 30
V 20
10
00

[72] PID::FP.PIN.DE VS TOF.RF1

Spectrum 72 X 25.48 Y 0.03 Counts 0

Geometry [Zoom] Update All Expand UnExpand
 Display Update Selected Info + - Log Flag
 Display + Marker Summing Region Integrate
 Cut Band Contour

ADC nonlinearity

ADC 4 all 32 channels

ADC 10 first 16 channels

Run#	130, 131	Start:	16:49	Date:	10/__/2005
Beam:	132	Stop:		On shift:	
<ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 		Trigger:	Hira Si Singles		
		Target upsteam:	Carbon		
		Target downsteam:	0.4 μm		
<p>Comments: CRDC are in Anode voltage in 950 V code development in progress, but data fine</p>					

efficiency = 91%

modification to CROCh, ~~do~~ ignore the previous CRDC as calibrations changed.

Run# 133	Start : 5:40 Stop:	Date: 10/___/2005
Beam: <ul style="list-style-type: none"> ● ¹²Be ● ¹⁴Be ● mixed ^xHe ● p ● source 	Trigger: Hira Si	On shift: Bob
	Target upstream:	
Target downstream: 12C etc		
Comments: new CRDE calibrations -		

Run 132 5:14 pm

10-6-05

- Main Utility Setup Groups View

User

Group 01	Channel Name	V0Set	I0Set	WMon	IMon	Rw	Status	Trip	#
	Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
	Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
	Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
	Tow0Card6	240.00 V	6.00 uA	239.75 V	3.72 uA	On		1.00s.0	
	Tow1Card15	290.00 V	6.00 uA	289.75 V	1.64 uA	On		1.00s.0	
	Tow1Card12	240.00 V	6.00 uA	239.50 V	2.06 uA	On		1.00s.0	
	Tow1Card9	200.00 V	6.00 uA	200.00 V	1.64 uA	On		1.00s.0	
	Tow1Card6	295.00 V	6.00 uA	294.25 V	1.30 uA	On		1.00s.0	
	Tow2Card12	210.00 V	6.00 uA	210.00 V	0.78 uA	On		1.00s.0	
	Tow2Card9	250.00 V	5.00 uA	249.50 V	1.22 uA	On		1.00s.0	
	Tow2Card6	250.00 V	6.00 uA	249.50 V	1.54 uA	On		1.00s.0	
	Tow2Card3	350.00 V	6.00 uA	349.50 V	1.92 uA	On		1.00s.0	
	Tow3Card15	210.00 V	6.00 uA	209.75 V	3.30 uA	On		1.00s.0	
	Tow3Card12	200.00 V	6.00 uA	199.75 V	1.24 uA	On		1.00s.0	
	Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
	Tow3Card6	310.00 V	7.00 uA	309.25 V	4.06 uA	On		1.00s.0	

Calibration beams

target (mg/cm ²)	rigidity B _p (Tm)	sum (pps/pnA)	P		He-4		He-6		He-8		
			E (MeV/u)	(pps/pnA)	(n(frag)/Zn)	E (MeV/u)	(pps/pnA)	(n(frag)/Zn)	E (MeV/u)	(pps/pnA)	(n(frag)/Zn)
3526	3.9878	1.10E+04									
3526	3.1577	9.20E+04									
3526	2.4908	4.50E+05									
1551	2.1170	4.90E+04	3	70.00	6820.00	0.02	30.00	1150.00	15.27	10.90	0.00
1551	1.9103	1.40E+04	4	50.00	2830.00	0.06	20.27	15.90	8.90	0.02	0.00
1034	1.0660	4.20E+02	5	40.00	1560.00	0.11	15.19	8.36	5.01	0.01	0.00
			6	50.00	166.00	0.40					

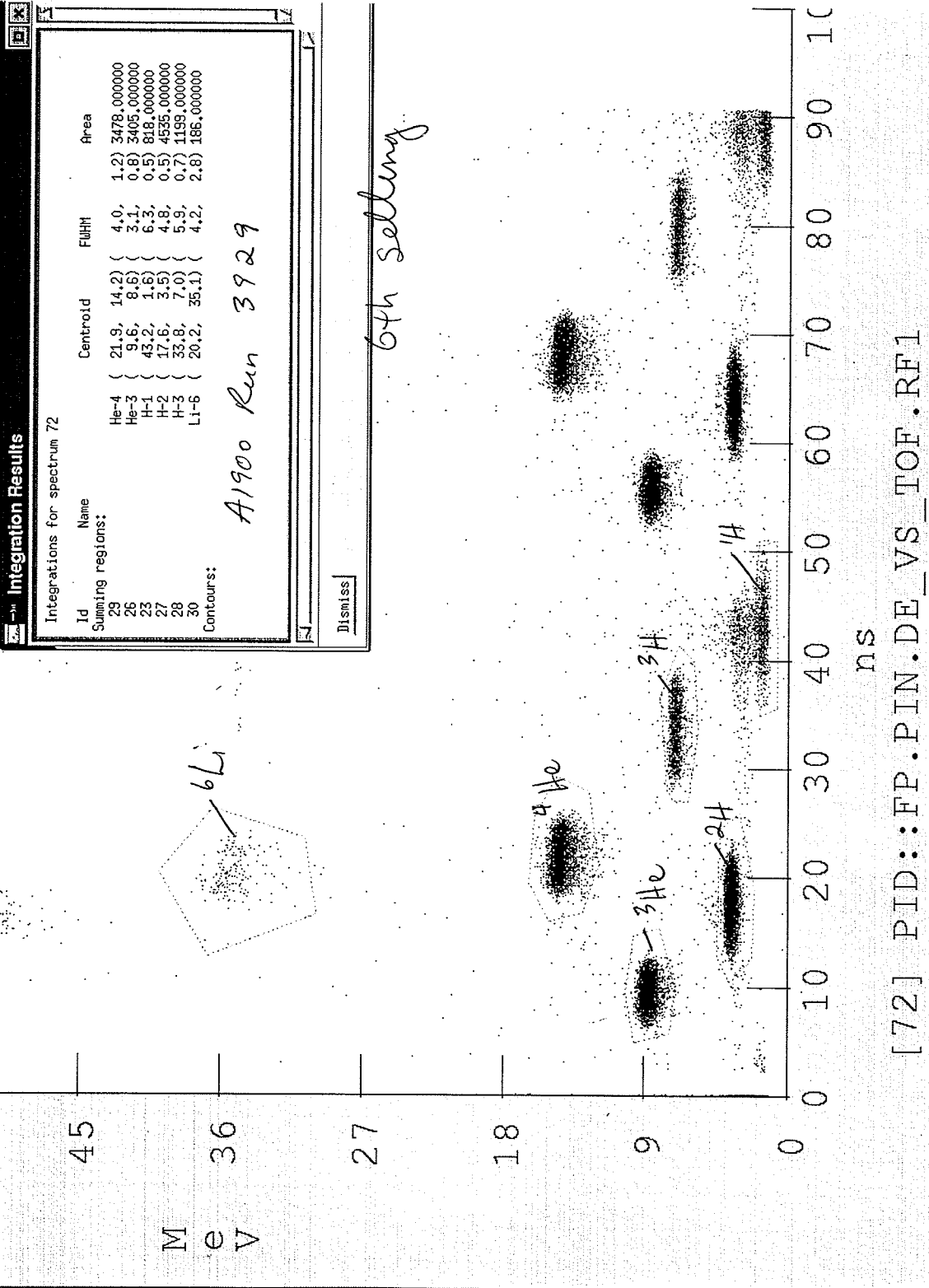
25
24
23
22
21
20

$^8\text{He} = 361.6$

503

8

Daniel L. 22



Integration Results

Integrations for spectrum 72

Id	Name	Centroid	FWHM	Area
29	He-4	(21.9, 14.2)	(4.0,	1.2) 3478.000000
26	He-3	(9.6, 8.6)	(3.1,	0.8) 3405.000000
23	H-1	(43.2, 1.6)	(6.3,	0.5) 818.000000
27	H-2	(17.6, 3.5)	(4.8,	0.5) 4535.000000
28	H-3	(33.8, 7.0)	(5.9,	0.7) 1199.000000
30	L1-6	(20.2, 35.1)	(4.2,	2.8) 186.000000

A1900 Run 3929

Dismiss

Spectrum 72

X 3.05

Y 0.03

Counts 0

Geometry Zoom
 Display
 Display +

Update All Expand
 Update Selected UnExpand
 Info + Log Map

Marker Out
 Summing Region Band
 Integrate Contour

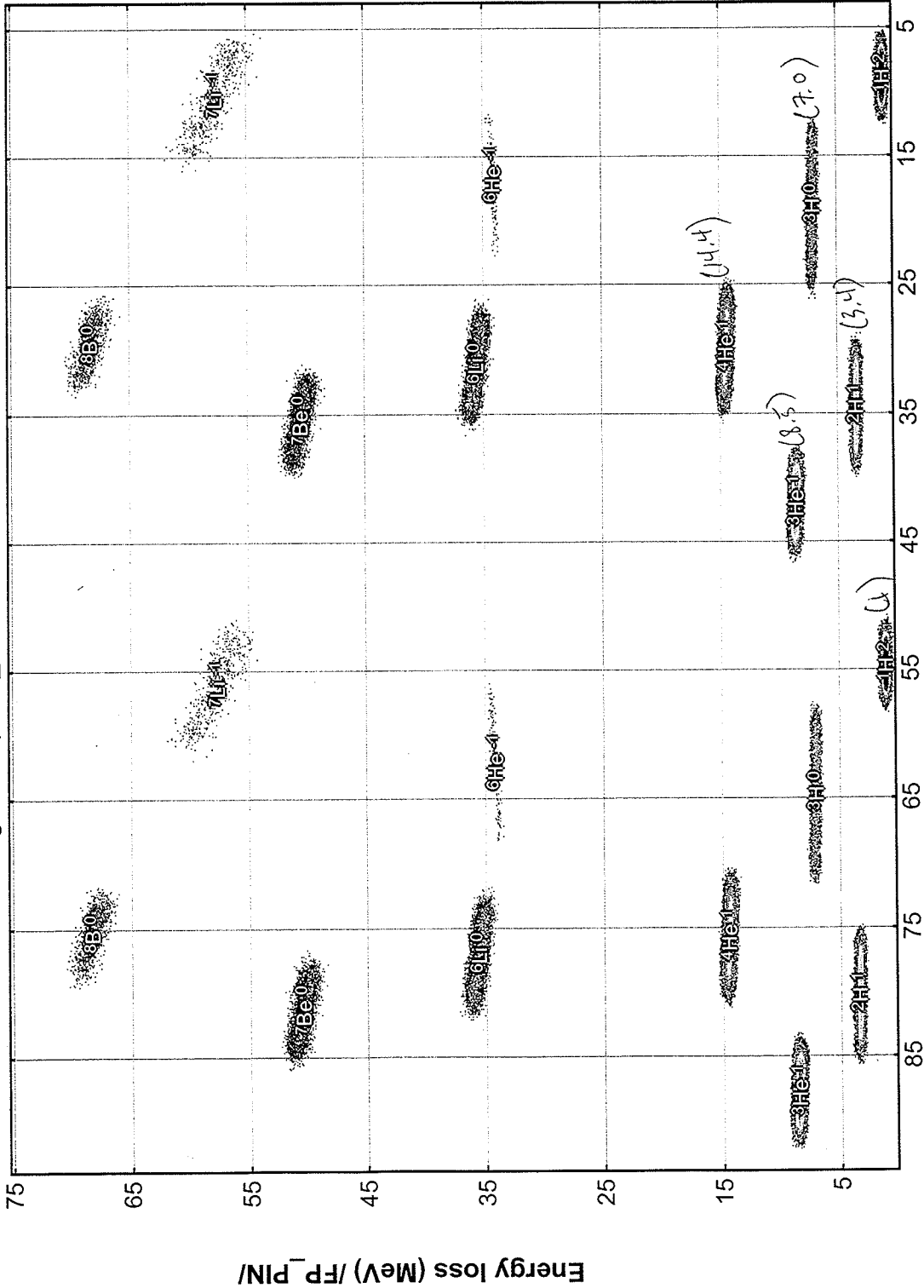
[72] PID::FP.PIN.DE_VS_TOF.RF1

dE-TOF

^{18}O (120.6 MeV/u) + Be (1034 mg/cm²); Settings on ^4He ; Config: DDSDDMSMMM
 dp/p=1.00%; Brho(Tm): 1.0397, 1.0397, 1.0397, 1.0397, 1.0397
 Start: Target; Stop: FP_PIN; ACQ_start: RF ** dE: FP_PIN - Si (470 μm)

without charge states
 all reactions separ.

$P = 50,000$
 $d = 12.7674$
 $A = 5.71532$



SUM
 6.850e+05
 Speed
 0 pps
 Beam: Fe-13

797
495
307
191
46
29
18
11
7
5
2
1

Energy loss on Poly Target = 1.339 MeV

Run# 134, 135, 136	Start : Stop:	Date: 10/___/2005
Beam: • ^{12}Be • ^{14}Be • mixed ^xHe • <u>p</u> • source	Trigger: <u>Lassa</u> CsI Singles	On shift: Bob
Target upsteam: ^{12}C 5mm		Target downsteam:
Comments: first two runs short as $E=50\text{ MeV}$ 6th Calibration Setting		

Run# 136, 137, 138	Start : 8:45 Stop:	Date: 10/___/2005
Beam: • ^{12}Be • ^{14}Be • mixed ^xHe • <u>p</u> • source	Trigger: <u>HIRA</u> Si Singles	On shift: Bob
Target upsteam:		Target downsteam: ^{12}C 6mm
Comments: HIRA p Calibration $E=50\text{ MeV}$		

Run# 139	Start : 8:40 pm. Stop: 20:55	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: HTRA single	On shift: bols
Target upstream:		
Target downstream: Thick Poly		
Comments: CRDC in + working. Z108 had drifted. Different mix in the beam.		

139 10/7/05 20:40

- Main Utility Setup Groups View
Group 01

User

Channel Name	V0Set	I0Set	WMon	IMon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.80 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.46 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.68 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.58 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.02 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.60 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.28 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.74 uA	On		1.00s.0	
Tow2Card9	250.00 V	6.00 uA	249.50 V	1.16 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.48 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.82 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.30 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.20 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.96 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	3.84 uA	On		1.00s.0	

Run# 140	Start : 20:56 Stop: 21:56	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA single	On shift: Sylvie
	Target upstream: Target downstream: Thick poly	
Comments: 2 working CRDCs		

Run# 141	Start : 21:56 Stop: 22:14	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HiRA single	On shift: Sylvie
	Target upstream: Target downstream: Thick poly	
Comments:		

We closed the slits and are now running with attenuation 3.

Run# 142	Start : 22:25 Stop: 23:15	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Si singles.	On shift: Sylvie
	Target upsteam:	
Comments:		

Run# 143 144	Start : 23:15 Stop: 23:33 0:38	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Si singles	On shift: Cwl
	Target upsteam:	

Run# 145	Start : 0:42 Stop: 1:17	Date: 10/7/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • ^{14}Be • mixed ^xHe • p • source 	Trigger: HIRA Si single	On shift: Sylvie
	Target upsteam:	

Comments: Paused/Resumed after ~17 minutes.
Paused/Resumed at 1:15. and ended (unstable beam)

Run# 146	Start : Stop: 0204	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • ¹⁴Be • mixed ^xHe • p • source 	Trigger: AIRA Si Single	On shift: Sylvie Sergey and Sergey
	Target upsteam:	
Comments: Stops, no trigger signal		

#146 1:24 10/8/05

- Main Utility Setup Groups View

Channel Name	V0Set	I0Set	W0n	IM0n	Rw	Status	Trip	User #
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	239.75 V	3.74 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.64 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.06 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.64 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.30 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	6.00 uA	249.50 V	1.18 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.90 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.34 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.02 uA	On		1.00s.0	

Display/Edit Group 01

LocEn V0 10

T | CAEN SY252

Run# 147	Start: 02 ⁰⁹	Stop: 02 ⁰⁹	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: 0295		On shift:
	Target upsteam:		
Comments: Same problem, no trig. signal run for 2 min			

run #148 last with Poly target
 3⁰⁰ we put Carbon target (134 mA)

Run# 149/150	Start: 03:09	Stop:	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^{He} • p • source 	Trigger: HiRA single		On shift: S ³
	Target upsteam:		
Comments:			
		Target downsteam: Carbon (134 mA)	

10/8/05 LASSA Si leakage currents:

3:00

L1 = 0.41 μ A ; L2 = 1.71 μ A

L3 = 2.48 μ A ; L4 = 2.3 μ A

#151

10/8/05 5:39

User

- Main Utility Setup Groups View

Group 01

Channel Name	V0Set	I0Set	VMon	IMon	Rw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.25 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.76 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.68 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.12 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.68 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.32 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	6.00 uA	249.50 V	1.20 uA	On		1.00s.0	
Tow2Card6	250.00 V	6.00 uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.90 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.38 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.24 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.06 uA	On		1.00s.0	

7/8/05 7:00

INSERT THICK POLY TARGET

Run# 154	Start: 7:09	Stop: 8:16	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: HiRA Si Singles	On shift: S ³ Marc-Jan Jeremy	
	Target upsteam:		
	Target downsteam: thick poly 1mm		
Comments: Paused/Resumed at 7:16			

Run # 154 10/08/05 7:20 AM
- Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	V0bn	I0bn	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.80 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.70 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.14 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.70 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.34 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	6.00 uA	249.50 V	1.22 uA	On		1.00s.0	
Tow2Card6	250.00 V 6	uA	249.50 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.92 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.40 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.24 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.08 uA	On		1.00s.0	

Run# 155	Start : 8:16	Stop:	Date:10/8/2005
Beam: • ¹² Be • mixed ^x He • p • source	Trigger: HiRA Si Singles		On shift: Marc-Jean Jenny Betty
	Target upsteam:	Target downsteam: thick poly 1mm	
Comments:			

Run# 156	Start : 9:13	Stop: 9:30	Date:10/_/2005
Beam: • ¹² Be • mixed ^x He • p • source	Trigger: HiRA Si Singles		On shift: Marc-Jean Jenny Betty
	Target upsteam:	Target downsteam: thick poly 1mm	
Comments:			

Run# 157	Start : 9:31	Stop: 9:40	Date: 10/8/2005
Beam: • ^{12}Be • mixed ^xHe • p • source	Trigger: HIRA Si		On shift: Marc-Jan Betty Jenny Bob.
	Target upsteam: Target downsteam: CH ₂ 1mm		
Comments: DADA Acquisition Crash.			

Run# 158	Start : 9:40	Stop:	Date: 10/8/2005
Beam: • ^{12}Be • mixed ^xHe • p • source	Trigger: HIRA Si		On shift: Marc Jan Betty Jenny Bob
	Target upsteam: Target downsteam: CH ₂ 1mm.		
Comments:			

Run# 159	Start : 9:55	Stop: 10:30	Date: 10/8/2005
Beam: • ^{12}Be • mixed ^xHe • p • source	Trigger: HIRA		On shift: Marc Jan Betty Jenny Bob
	Target upsteam: Target downsteam: CH ₂		
Comments:			

Calibration Beam Summary

Run	Start	End	Elapsed	Type	Beam	Ebeam	Target	comment	Calib settin
11	21:35:20	10/2/2005	22:19:46	0:44:26	Alpha				
12	22:40:29	10/2/2005	0:12:54	1:32:25	Alpha				
25	7:19:55	10/4/2005	7:45:40	0:25:45	Alpha				
31	19:51:30	10/4/2005	20:09:30	0:18:00	Alpha				
56	12:10:13	10/5/2005	12:46:46	0:36:33	Alpha				
57	12:50:55	10/5/2005	14:22:59	1:32:04	Alpha				
58	14:34:49	10/5/2005	14:55:25	0:20:36	Alpha				
60	15:38:11	10/5/2005	15:42:59	0:04:48	Alpha				
77	10:01:38	10/6/2005	10:06:41	0:05:03	beam position				
78	12:05:57	10/6/2005	12:17:00	0:11:03	Calibration 6He, He		80 12C		1
79	12:17:11	10/6/2005	12:23:53	0:06:42	Calibration 6He, He		80 12C		1
80	12:33:53	10/6/2005	12:41:14	0:07:21	Calibration 6He, He		80 12C		1
81	12:52:16	10/6/2005	13:26:09	0:33:53	Calibration 6He, He		80 197Au		1
82	13:26:20	10/6/2005	13:37:48	0:11:28	Calibration 6He, He		80 197Au		1
83	13:37:57	10/6/2005	13:56:48	0:18:51	Calibration 6He, He		80 197Au	45 MeV He8	1
84	13:56:57	10/6/2005	14:04:23	0:07:26	Calibration 6He, He		80 197Au	45 MeV He8	1
85	14:06:20	10/6/2005	14:15:51	0:09:31	Calibration 6He, He		80 197Au	45 MeV He8	1
86	14:24:21	10/6/2005	14:38:39	0:14:18	Calibration 6He, He		80 12C		1
87	15:55:59	10/6/2005	16:05:09	0:09:10	Calibration 6He, He		80 12C		1
117	8:51:56	10/7/2005	9:13:51	0:21:55	Calibration 6He, He		50 12C		2
118	9:24:09	10/7/2005	9:32:36	0:08:27	Calibration 6He, He		50 12C	wedge in A1900	2
119	9:32:44	10/7/2005	9:50:42	0:17:58	Calibration 6He, He		50 12C		2
120	10:02:43	10/7/2005	10:09:20	0:06:37	Calibration 8He, He		27.34 12C		2
121	10:18:09	10/7/2005	10:28:58	0:10:49	Calibration 8He, He		27.34 197Au		2
122	11:04:10	10/7/2005	11:34:26	0:30:16	Calibration He		70 12C		3
123	11:52:43	10/7/2005	12:23:16	0:30:33	Calibration 6He, He		30 12C		3
124	13:04:37	10/7/2005	13:23:26	0:18:49	Calibration 4He, He		50 12C		4
125	13:23:34	10/7/2005	14:20:35	0:57:01	Calibration 4He, He		50 12C		4
126	14:20:50	10/7/2005	14:22:18	0:01:28	Calibration 4He, He		50 12C		4
127	14:37:16	10/7/2005	14:52:47	0:15:31	Calibration 4He, He		50 12C		4
128	14:53:00	10/7/2005	15:07:13	0:14:13	Calibration 4He, He		50 12C		4
129	15:44:14	10/7/2005	16:08:42	0:24:28	Calibration 4He, He		40 12C	69.37 MeV/A 3He	5
134	18:54:15	10/7/2005	18:54:43	0:00:28	Calibration p		50 12C	LASSA	6
135	19:22:31	10/7/2005	19:29:47	0:07:16	Calibration p		50 12C		6
136	19:53:11	10/7/2005	19:59:47	0:06:36	Calibration p		50 12C		6
137	20:00:15	10/7/2005	20:03:55	0:03:40	Calibration p		50 12C		6
138	20:04:01	10/7/2005	20:10:35	0:06:34	Calibration p		50 12C		6

Moved Si target in

Run# 160	Start : 10:40	Stop: 10:50	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed • p • source ^xHe	Trigger: Si target		On shift: Marc-Jun Betty Bob Jenny
	Target upstream:	Target downstream: Si target	
Comments: Object scint was off			

Run# 161	Start : 10:50	Stop: 10:55	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed • p • source ^xHe	Trigger: Si target		On shift: Marc-Jun Betty Bob Jenny
	Target upstream:	Target downstream: Si target	
Comments: Object scint is on			

Run# 102	Start : 10:58	Stop: 11:20	Date: 10/9/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed • p • source ^xHe	Trigger: Si target		On shift: Marc-Jun Betty Bob Jenny
	Target upstream:	Target downstream: Si target	
Comments: running mask on CRDC			

trading parameters

$5800 \cdot \text{im} \cdot \text{track} \cdot \text{terdc}2 \cdot \text{pad} \cdot \text{ped} \cdot 09 = 161.353 \text{ AU}$
 $5800 \cdot \text{im} \cdot \text{track} \cdot \text{terdc}1 \cdot \text{calc. method} = 1$
 $5800 \cdot \text{im} \cdot \text{track} \cdot \text{terdc}1 \cdot x\text{-slope} = 2.54 \text{ mm/pad}$
 $5800 \cdot \text{im} \cdot \text{track} \cdot \text{calc. gravity-width} = 16 \text{ pad}$

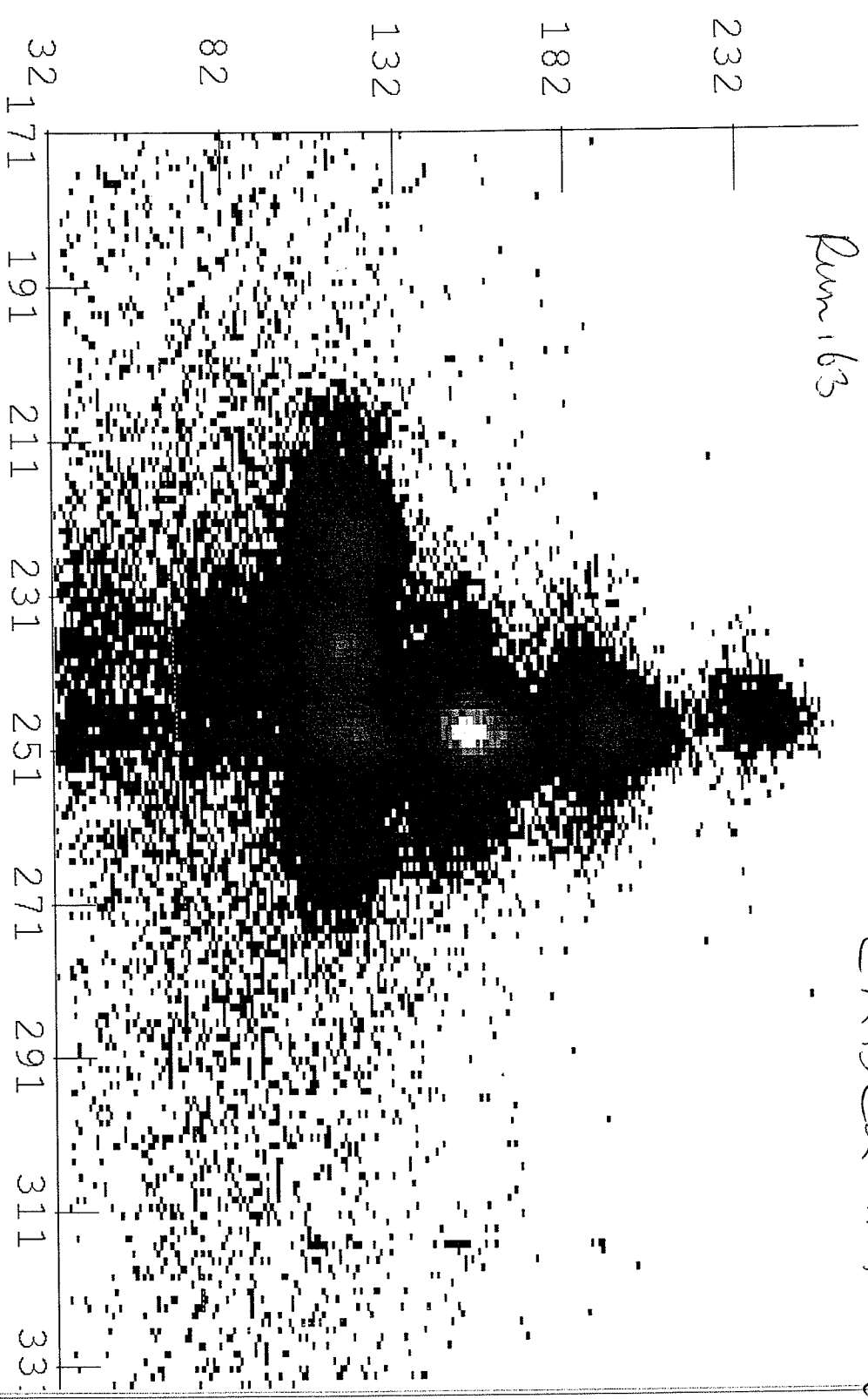
Run# 163	Start : 11:27	Stop: 11:49	Date: 10/2/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: Si target		On shift: Bob Marc-Jan Betty Jenny
	Target upsteam: Target downsteam: Si target		
Comments: mask on the CRDC 2			

11:50 Switch to Carbon target 0.4 mm downstream

Run# 164	Start : 12:10	Stop:	Date: 10/2/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: HIRA Si		On shift: Bob Marc-Jan Betty Jenny
	Target upsteam: Target downsteam: Si target ¹² C target 0.4mm		
Comments: Carbon target, lost XFP scint scaler XFP connection get leno near big brother (above it) got pulled out slightly			

Run 163

CRDC2 MASA



Spectrum 32

X 333

Y 117

Counts 0

- Geometry
- Zoom
- Update All
- Expand
- Marker
- Update Selected
- UNExpand
- Summing Region
- Display
- Info + -
- Log
- Map
- Integrate
- Band
- Contour

Run# 165	Start: 12:15	Stop:	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed ^xHe • p • source 	Trigger: HiRA Si		On shift: Marc-Jan Bob Betty Jenny
	Target upsteam:	Target downstream: ^{12}C 0.4 mm (downstream)	
Comments: XFP scint is back! ZrL in HiRA Si towers 0, 2, 3 is high 150 Hz			

Run# 166	Start: 12:51	Stop:	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed ^xHe • p • source 	Trigger: HiRA Si		On shift: Marc-Jan Bob Betty Jenny
	Target upsteam:	Target downstream: ^{12}C 0.4 mm ds	
Comments: still problems with High HiRA Si, ZrL after XLM tested investigating			

Run# 167, 168	Start: 13:50	Stop: 15:01	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed ^xHe • p • source 	Trigger: HiRA Si		On shift: Marc-Jan Bob Betty Jenny
	Target upsteam:	Target downstream: ^{12}C 0.4 mm	
Comments: still noise on HiRA Si; Beam intensity dropped (168 is after beam back)			

- Shut down the turbo pump

Run 169 10/08/2005 12:04

- Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	W0n	IMon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.14 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.82 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.74 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.18 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.74 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.34 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.78 uA	On		1.00s.0	
Tow2Card9	250.00 V	6.00 uA	249.50 V	1.22 uA	On		1.00s.0	
Tow2Card6	250.00 V 6	uA	249.75 V	1.54 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.94 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.42 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.24 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	1.00 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.10 uA	On		1.00s.0	

Run# 168 169	Start : 15:01	Stop:	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ⁴He • p • source 	Trigger: HIRA S:	On shift: Marc-Jean Betty Bob Jimmy	
	Target upsteam:		
	Target downsteam: ¹² C 0.4 mm		
Comments: Still noise on HIRA 2/188 Hz (~150 Hz noise)			

Lassa leakage currents 4: PM 10-7-05

1 = 0.41 2 = 1.7 uA 3 = 2.50, 4 = 2.4 uA.

Run# 170	Start: 16:35	Stop: 17:35	Date: 10/ /2005
Beam: • ¹² Be • mixed ^x He • p • source	Trigger: HIRA SINGLES	On shift: Bob Andy	
	Target upstream: Target downstream: thick. Poly		
Comments:			

Run# 171, 172	Start: 17:35	Stop:	Date: 10/ /2005
Beam: • ¹² Be • mixed ^x He • p • source	Trigger: HIRA SINGLES	On shift: Bob Andy	
	Target upstream: Target downstream: Thick Poly		
Comments: continue Run 174 ended when losing beam.			

7171 17:48 10/31/05

- Main Utility Setup Groups View

User

Group 01

Channel Name	V0Set	I0Set	WMon	IMon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.84 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.66 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.08 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.64 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.30 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	6.00 uA	249.50 V	1.20 uA	On		1.00s.0	
Tow2Card6	250.00 V 6	uA	249.75 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.92 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.44 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.08 uA	On		1.00s.0	

Run# 175	Start : 19:28	Stop:	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: HIRA Si singles		On shift:
	Target upsteam: Target downsteam: Thick poly		
Comments:			

Run# 176	Start : 16:51	Stop:	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: HIRA Si		On shift:
	Target upsteam: Target downsteam: Poly (1.0mm)		
Comments: Beam returned after deflector conditioning.			

Run# 177, 178	Start : 22:25	Stop:	Date: 10/6/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: HIRA Si		On shift: Bob
	Target upsteam: Target downsteam: Poly (1mm)		
Comments: continued			

Run# 179, 180	Start : 23:13	Stop:	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: HIDA singles.		On shift: Sylvie
	Target upsteam: Target downstream: ϵ Thick poly (1mm)		
Comments:			

- Main Utility Setup Groups View #179 23:37 10/8/05 User

Group 01

Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.25 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.82 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.60 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.00 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.00 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	6.00 uA	249.50 V	1.20 uA	On		1.00s.0	
Tow2Card6	250.00 V 6	uA	249.75 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.92 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.46 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.10 uA	On		1.00s.0	

Run# 181, 182	Start : 12:23am	Stop:	Date: 10/9/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: HIDA single 01:30 12-13		On shift: S ² + Pong
	Target upsteam: Poly 1114 Target downstream:		
Comments:			

Group 01

Channel Name	V0Set	I0Set	WMon	IMon	Rw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.82 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.60 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.00 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.76 uA	On		1.00s.0	
Tow2Card9	250.00 V	6.00 uA	249.50 V	1.22 uA	On		1.00s.0	
Tow2Card6	250.00 V	6 uA	249.75 V	1.52 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.92 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.48 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.10 uA	On		1.00s.0	

Display/Edit Group 01

LocEn V0 I0

T

CAEN SY252

02⁵⁰ Tarapt Poly is off, Carbon (0.9) is on. Beamer tuning for 30min

2:50 CASSA Fi leakage current:

L1: 0.42 μ A ; L2: 1.73 μ A ; L3: 2.53 μ A ; L4: 2.4 μ A

Run 183 - Junk

Run# 184, 185	Start: 3:35	Stop: 5:25	Date: 10/9/2005
Beam: <ul style="list-style-type: none"> ^{12}Be mixed ^xHe p source 	Trigger: HIRA	On shift: S ² + Pang	
	Target upstream: Target downstream: ^{12}C (0.4 mm)		
Comments: lost trigger + beam at the end of 185			

#184 3:40

10/9/05

- Main Utility Setup Groups View

Group 01	Channel Name	V0Set	I0Set	W0n	IM0n	Pw	Status	Trip	User #
	Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
	Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
	Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
	Tow0Card6	240.00 V	6.00 uA	240.00 V	3.84 uA	On		1.00s.0	
	Tow1Card15	290.00 V	6.00 uA	289.75 V	1.58 uA	On		1.00s.0	
	Tow1Card12	240.00 V	6.00 uA	239.50 V	2.00 uA	On		1.00s.0	
	Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
	Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
	Tow2Card12	210.00 V	6.00 uA	210.00 V	0.78 uA	On		1.00s.0	
	Tow2Card9	250.00 V	6.00 uA	249.50 V	1.22 uA	On		1.00s.0	
	Tow2Card6	250.00 V 6	uA	249.75 V	1.54 uA	On		1.00s.0	
	Tow2Card3	350.00 V	6.00 uA	349.50 V	1.92 uA	On		1.00s.0	
	Tow3Card15	210.00 V	6.00 uA	209.75 V	3.50 uA	On		1.00s.0	
	Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
	Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
	Tow3Card6	310.00 V	7.00 uA	309.25 V	4.10 uA	On		1.00s.0	

Run# 186	Start: 5:25	Stop: 5:33	Date: 10/9/2005
Beam: <ul style="list-style-type: none"> ^{12}Be mixed ^xHe p source 	Trigger: HIRA Si style	On shift: S ² + Pang	
	Target upstream: Target downstream: ^{12}C (0.4 mm)		
Comments: 186 lossy beam.			

6:36 - Source problem
7:34 - beam is back

Run# 187	Start : 7:34	Stop: 7:40	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: HiRA Si		On shift: Sergey Jimmy Marc-Jan Betty
	Target upstream: Target downstream: ¹² C (0.14 mm)		
Comments:			

User

#

changed target to thick poly 1 mm
1251 YR position: 60.0 mm

00s.0
00s.0
00s.0
00s.0
00s.0
00s.0
00s.0
00s.0
00s.0
00s.0
00s.0
00s.0

Run# 188	Start : 8:45	Stop: 9:08	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: HiRA Si		On shift: Marc-Jan Sergey Jimmy Betty
	Target upstream: Target downstream: thick poly		
Comments: operator requested time to check water leakage radi turns out to be ice melting			

9:18 Beam back

Run# 189	Start : 9:18	Stop: 9:49	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: HiRA Si		On shift: Marc-Jan Sergey Jimmy Betty
	Target upstream: Target downstream: thick poly		
Comments: Run control / DAO crash / Rebooted SSCOME!			

Run 188 10/03/2005 9:04 AM

Channel Name	V0Set	I0Set	W0n	IM0n	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.12 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.82 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.58 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.00 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.78 uA	On		1.00s.0	
Tow2Card9	250.00 V	6.00 uA	249.50 V	1.24 uA	On		1.00s.0	
Tow2Card6	250.00 V 6	6.00 uA	249.75 V	1.56 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.94 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.52 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.22 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.12 uA	On		1.00s.0	

Run# 190	Start : 10:40	Stop: 11:40	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> ^{12}Be mixed ^xHe p source 	Trigger: HIRA S.-		On shift: Marc Jan Sergey Betty Jenny
	Target upsteam:	Target downsteam:	
Comments: thick poly.			

Don't see Run 189 in Beam E-log, checked completed directory it is there. Maybe due to Resident crash.

Run# 191	Start : 11:40	Stop: 12:37	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> ^{12}Be mixed ^xHe p source 	Trigger: HIRA S.		On shift: Marc-Jan Sergey Betty Jenny
	Target upsteam:	Target downsteam:	
Comments: thick poly			

12:40 Moved Si strip detector in to target position 229.5

Run# 192	Start : 12:49	Stop: 12:55	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed • p • source ^xHe	Trigger: Si Target		On shift: Marc-Jan Sergey Betty Jenny
	Target upsteam:	Target downsteam: Si Target	
Comments:			

Run# 193	Start : 12:57	Stop: 13:07	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed • p • source ^xHe	Trigger: Si Target		On shift: Marc-Jan Sergey Carl Bob
	Target upsteam:	Target downsteam: Si Target	
Comments: CRDC1 mask inserted			

Run# 194	Start : 13:07	Stop: 13:17	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed • p • source ^xHe	Trigger: Lassa Si Target-		On shift: Carl Bob Marc-Jan
	Target upsteam:	Target downsteam: Si Target	
Comments: CRDC2 mask inserted			

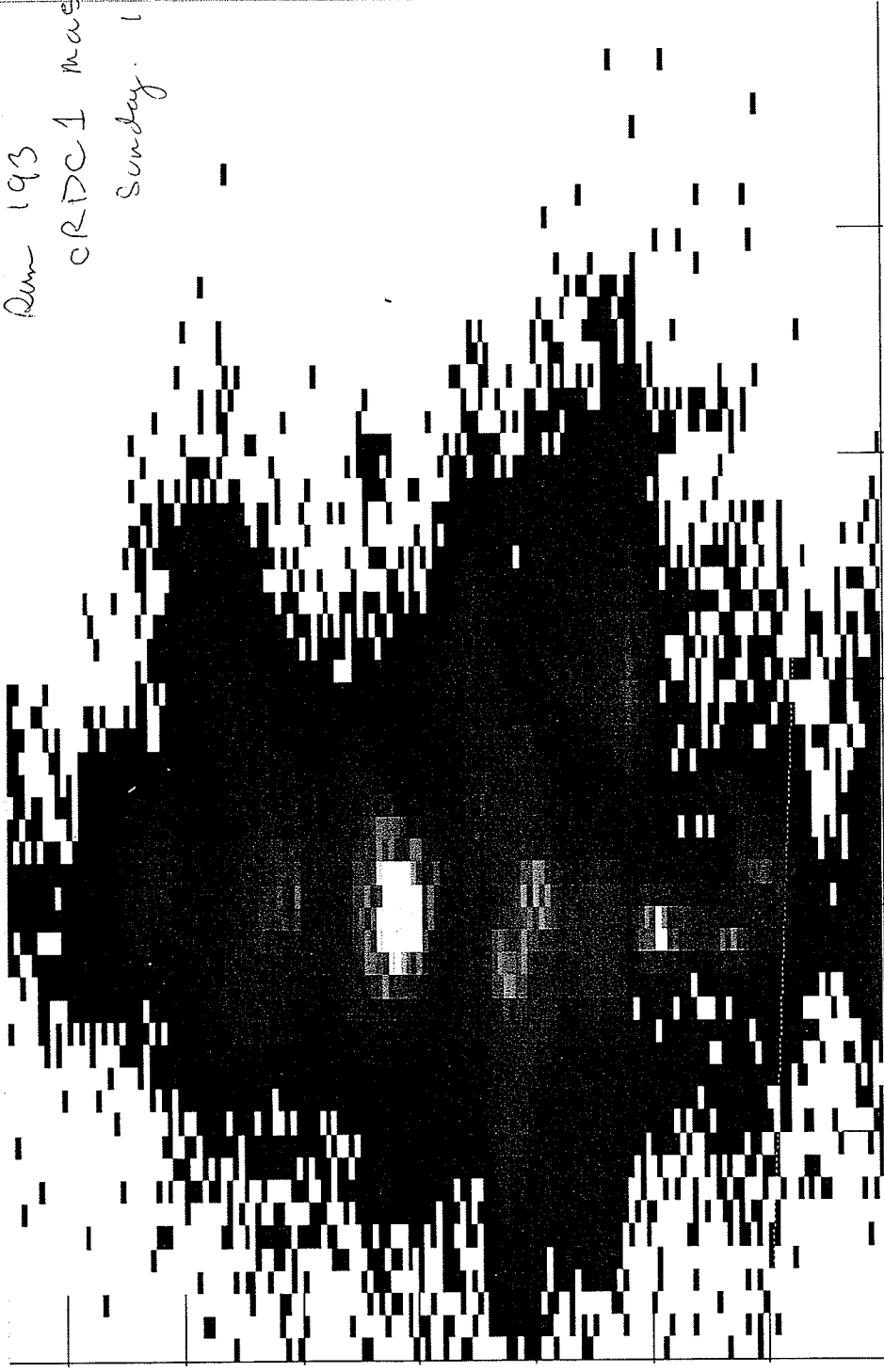
\\farnite -- \\\\sa1330\\dapl595\\site192019\\win2019\\win [modified]

Help

Run 193

CRDC1 mask.
Sunday 1pm.

File Window Spectra Options Graph_objects



19 221 231 241 251 261 271

[26] TCRDC1.XG%TCRDC1.TAC

Counts 1

X 225 Y 94

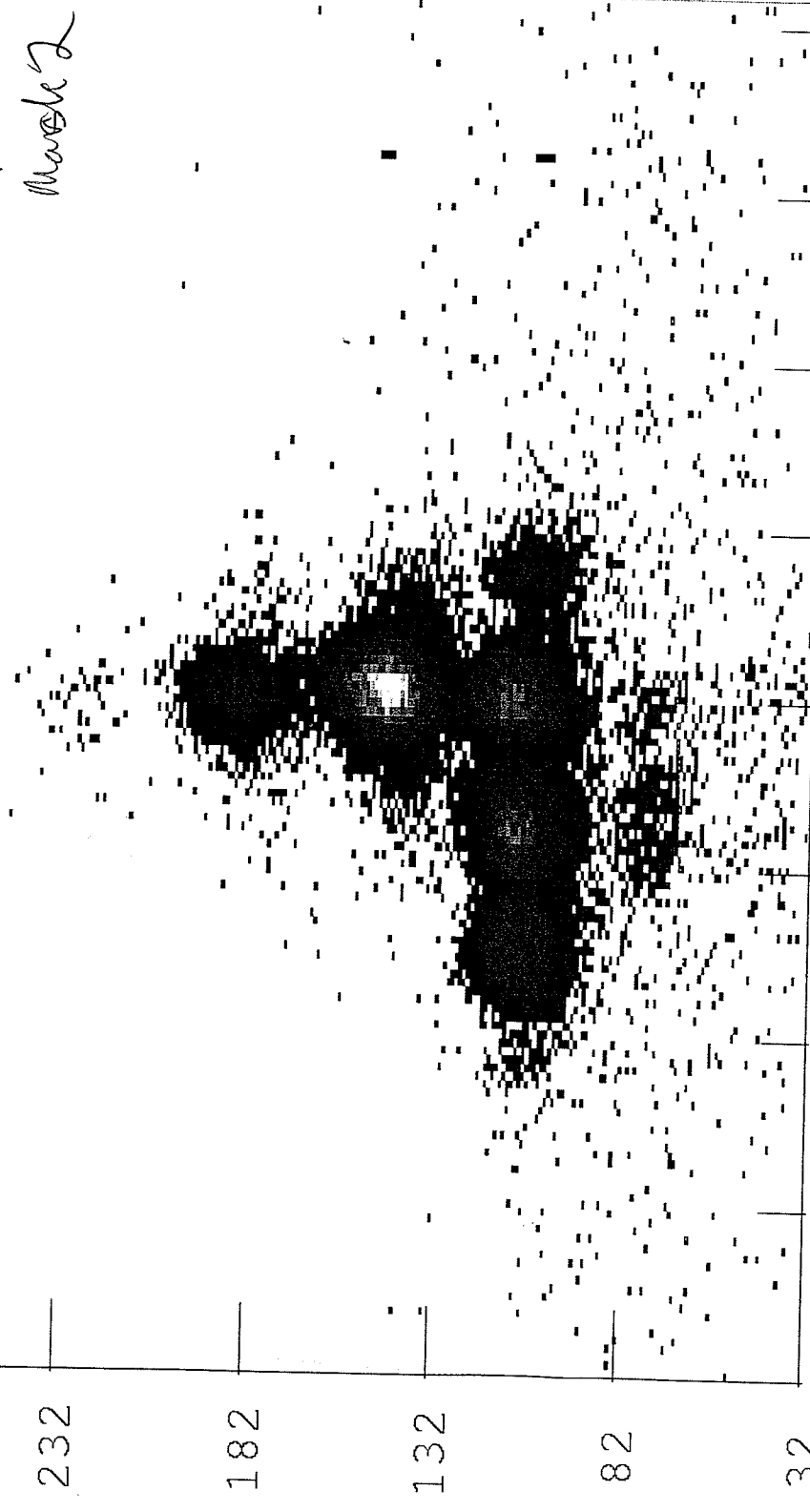
Spectrum 26

- Geometry
- Display
- Display +
- Zoom
- Update All
- Update Selected
- Info + -
- Expand
- UnExpand
- Log
- Map
- Integrate
- Marker
- Summing Region
- Integrate
- Fit
- Band
- Contour

C:\Zavolna -- /usr/local/epics/92013/92013_019_019_min [Modified]

File Window Spectra Options Graph_objects Help

Run 195
March 2



[32] TCRDC2.XG%TCRDC2.TAC

Spectrum 32 X 263 Y 268 Counts 0

- Geometry
- Display
- Display +
- Zoom
- Update All
- Update Selected
- Info +
- Expand
- UnExpand
- Log
- Marker
- Summing Region
- Map
- Integrate
- Exit
- Band
- Contour

Moved to ^{12}C target - 0.4 mm

Run# 195	Start: 13:30	Stop: 14:26	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> ^{12}Be mixed ^xHe p source 	Trigger: HIRA S:		On shift: Bob Marc-Jan Carl Sergey
	Target upstream:		
Target downstream: ^{12}C		Comments:	

Run# 196	Start: 14:27	Stop:	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> ^{12}Be mixed ^xHe p source 	Trigger: HIRA S:		On shift: Bob Marc-Jan Sergey Jenny
	Target upstream:		
Target downstream: ^{12}C		Comments:	

Run# 197	Start: 15:27	Stop: 16:31	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> ^{12}Be mixed ^xHe p source 	Trigger: HIRA S:		On shift: Bob Sergey Carl Andy
	Target upstream:		
Target downstream: ^{12}C		Comments:	

Run# 198, 199	Start: 17:32	Stop: 18:35	Date: 10/8/2005
Beam: <ul style="list-style-type: none"> ^{12}Be mixed ^xHe p source 	Trigger:	On shift: bob Sergey Andy Carl	
	Target upsteam:		
Target downstream: 12C			
Comments:			

CRDC 1 was found to give progressively narrower x position distribution when taking data. ~~At start of data taking~~ At start of data taking locked OK. But is narrow now. At this point we found it went back to normal if beam decreased by 10.

Lassa leakage

1 = 0.42 μA 2 = 1.75 3 = 2.52 4 = 2.42

Run# 200	Start: 18:40	Stop: 5:56	Date: 10/_/2005
Beam: <ul style="list-style-type: none"> ^{12}Be mixed ^xHe p source 	Trigger: HIRA Si	On shift: Bob Silve Andy Carl Betty	
	Target upsteam:		
Target downstream: Thick Poly			
Comments: lost RF			

Run# 201	Start : 17:57	Stop: 18:14	Date: 10/9/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed ^xHe • p • source 	Trigger: HIRA Single		On shift: Bob Sylvie Andy Carl Betty
	Target upsteam:	Target downsteam:	
Comments: <p style="text-align: center;">lost beam due to bad safety on neutron detectors</p>			

Run# 202	Start : 18:16	Stop: 18:32	Date: 10/9/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed ^xHe • p • source 	Trigger: HIRA Single		On shift: Bob Sylvie Andy Carl Betty
	Target upsteam:	Target downsteam:	
Comments: <p style="text-align: center;">Trigger Lost.</p>			

Run# 203, 204	Start : 18:32	Stop: 19:31	Date: 10/9/2005
Beam: 205, 206 <ul style="list-style-type: none"> • ^{12}Be • mixed ^xHe • p • source 	Trigger: HIRA Single		On shift: Bob Sylvie Andy Carl Betty
	Target upsteam:	Target downsteam:	
Comments: Run 206 stopped at 21:00. Run 205 stopped at 20:00			

Run# 207, 208	Start : 21:00	Stop: 22:00	Date: 10/09/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed ^xHe • p • source 	Trigger: HIRA single	On shift:	
	Target upsteam:		
	Target downsteam: $(\text{CH}_2)(1\text{mm})$		
Comments: stop 207 at 22:02			

Run# 210	Start : 22:40	Stop: 23:35	Date: 10/09/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed ^xHe • p • source 	Trigger: HIRA singles	On shift: Cool Sergey I	
	Target upsteam:		
	Target downsteam: $(\text{CH}_2)(1\text{mm})$		
Comments:			

For beam 210 Run 208 long and DA (today) had to be restarted. Up day and running a for in (210)

Run# 211	Start : 23:35	Stop: 12:59	Date: 10/09/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed ^xHe • p • source 	Trigger: HIRA singles	On shift: Cool Sergey I Marc-Jean	
	Target upsteam:		
	Target downsteam: $(\text{CH}_2)(1\text{mm})$		
Comments:			

Run# 212	Start: 01:00	Stop: 2:00	Date: 10/9/2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed ^xHe • p • source 	Trigger: HIRA Si	On shift: Marc-Jan Sergey *2	
	Target upsteam:		
Comments:		Target downstream: (CH ₂) ₃ 1 mm (thick poly)	

Channel Name	V0Set	I0Set	W0n	IM0n	Pw	Status	Trip	#
Tow0Card15	210.00 V	6.00 uA	209.50 V	0.82 uA	On		1.00s.0	
Tow0Card12	250.00 V	6.00 uA	250.25 V	1.14 uA	On		1.00s.0	
Tow0Card9	190.00 V	6.00 uA	189.50 V	0.48 uA	On		1.00s.0	
Tow0Card6	240.00 V	6.00 uA	240.00 V	3.90 uA	On		1.00s.0	
Tow1Card15	290.00 V	6.00 uA	289.75 V	1.60 uA	On		1.00s.0	
Tow1Card12	240.00 V	6.00 uA	239.50 V	2.02 uA	On		1.00s.0	
Tow1Card9	200.00 V	6.00 uA	200.00 V	1.58 uA	On		1.00s.0	
Tow1Card6	295.00 V	6.00 uA	294.25 V	1.26 uA	On		1.00s.0	
Tow2Card12	210.00 V	6.00 uA	210.25 V	0.80 uA	On		1.00s.0	
Tow2Card9	250.00 V	6.00 uA	249.50 V	1.26 uA	On		1.00s.0	
Tow2Card6	250.00 V 6	uA	249.75 V	1.58 uA	On		1.00s.0	
Tow2Card3	350.00 V	6.00 uA	349.50 V	1.96 uA	On		1.00s.0	
Tow3Card15	210.00 V	6.00 uA	209.75 V	3.58 uA	On		1.00s.0	
Tow3Card12	200.00 V	6.00 uA	199.75 V	1.24 uA	On		1.00s.0	
Tow3Card9	120.00 V	6.00 uA	120.00 V	0.98 uA	On		1.00s.0	
Tow3Card6	310.00 V	7.00 uA	309.25 V	4.18 uA	On		1.00s.0	

Run# 213	Start: 2:00	Stop:	Date: 10/ /2005
Beam: <ul style="list-style-type: none"> • ^{12}Be • mixed ^xHe • p • source 	Trigger: HIRA Si	On shift: Marc-Jan Sergey	
	Target upsteam:		
Comments:		Target downstream: (CH ₂) ₃ 1mm thick	

154 DL = 45

ECR problems

Run 214 - Junk

ENP exp. with Poly Target

- Changed target to ^{12}C 0.4 mm.
- Changed to α -source as beam will be gone for at least 1 hour.

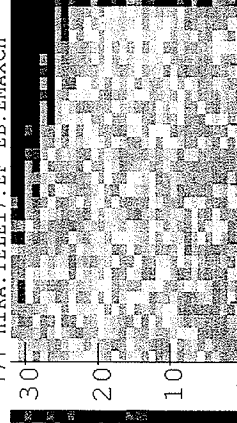
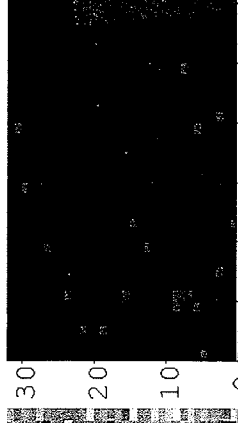
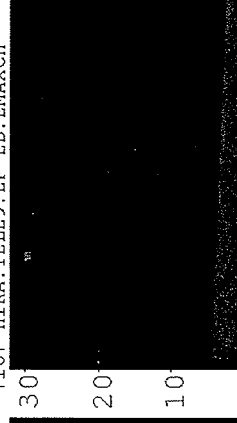
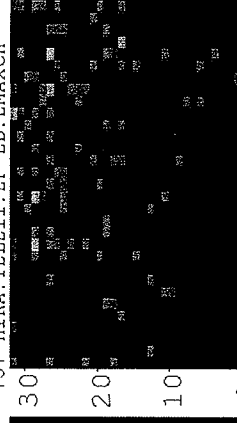
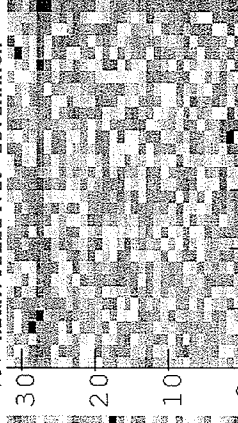
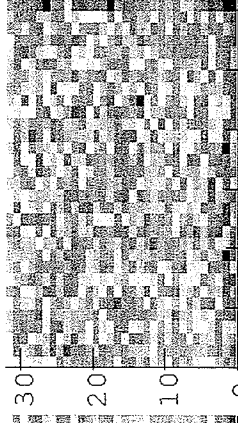
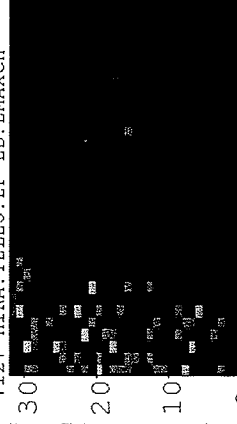
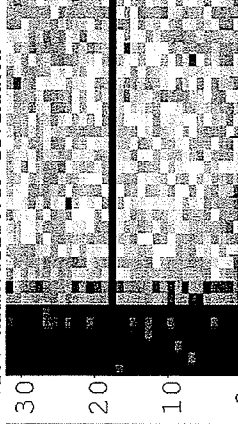
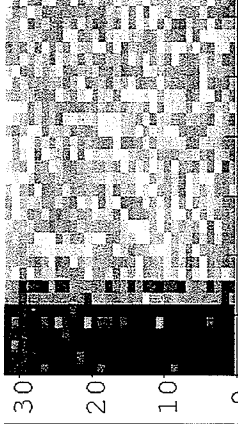
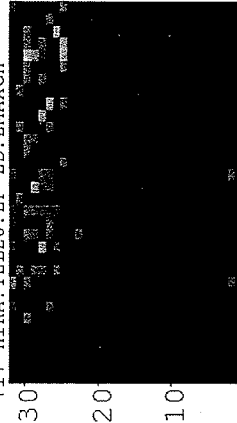
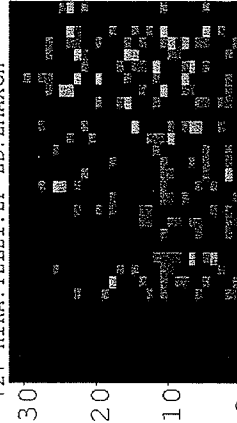
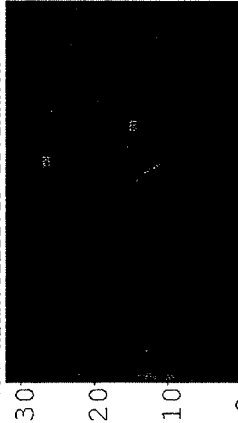
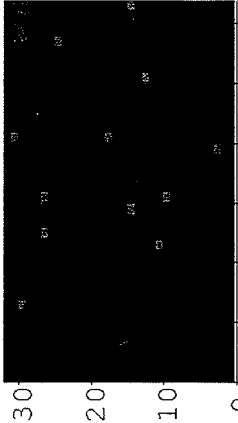
Run# 215 ²¹⁶ 19 ²¹⁷	Start: 3:15	Stop: 26:00	Date: 10/9/2005
Beam: • ^{12}Be • mixed ^xHe • p • source	Trigger: HiRA Si	Target upsteam: source	On shift: Marc Jen Sergey
Comments:		Target downstream: source	

I 250 Y-R 299.5

I 251 YR 0.0

6⁰⁰ beam is back

Si target is on



WU - Disk. dat

Lassa 1
 Shaper 4. Discrim. 4
 Chan 0 - bad trig. signal good

Run# 218	Start : 06:17 Stop:	Date:10/__/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: Si	On shift:
	Target upsteam:	
Comments:		

I 250 Y-R ϕ
 I 251 YR 227.5

Run# 219	Start : Stop:	Date:10/__/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger: Si	On shift:
	Target upsteam:	
Comments: mas R 6" CRCP1		
Run# 220	Start : Stop:	Date:10/__/2005
Beam: <ul style="list-style-type: none"> • ¹²Be • mixed ^xHe • p • source 	Trigger:	On shift:
	Target upsteam:	
Comments: 6" CRPC2		