

## Participants

A. Gade

G. Gringer

A. Ratkiewicz

R. Winkler

K. Maierbacher

D. Weisshaar

T. Baugher

B. Tsang

B. Lynch

Zibi

Dan Coupland

Tilak

M. Howard

Mike Young

Rachel

Micha

~~Mike~~

Brett

Jack

Patrick

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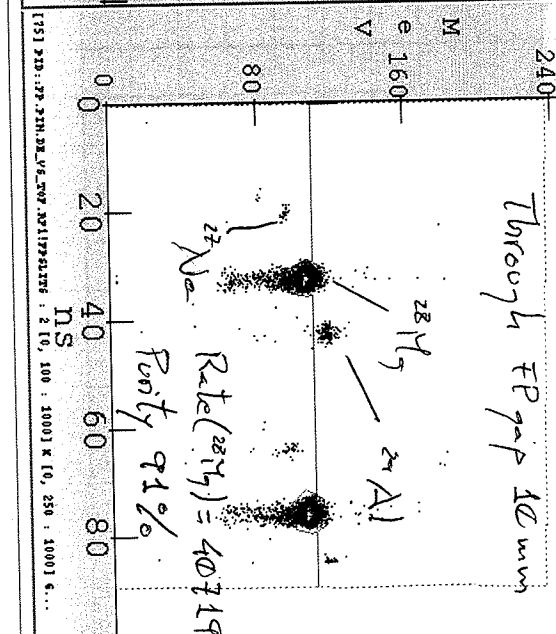
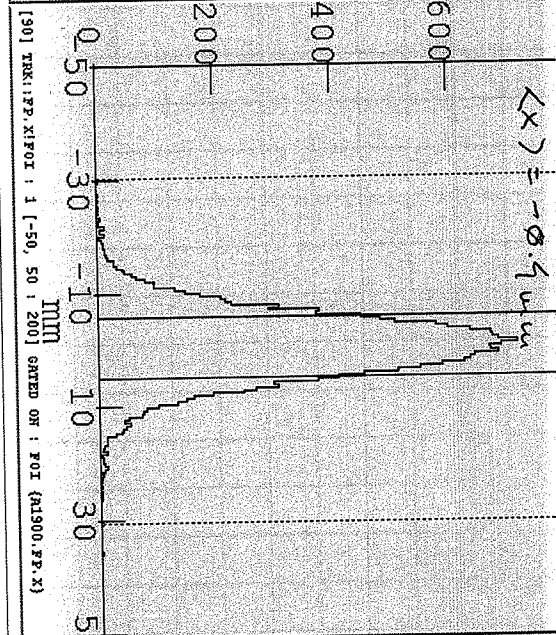
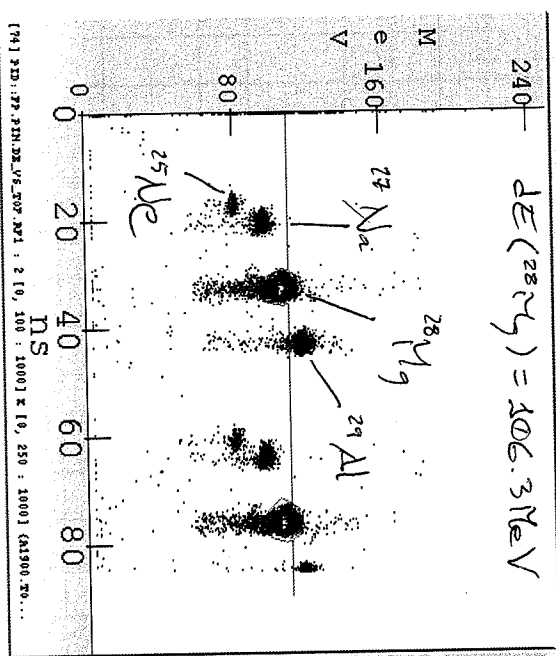
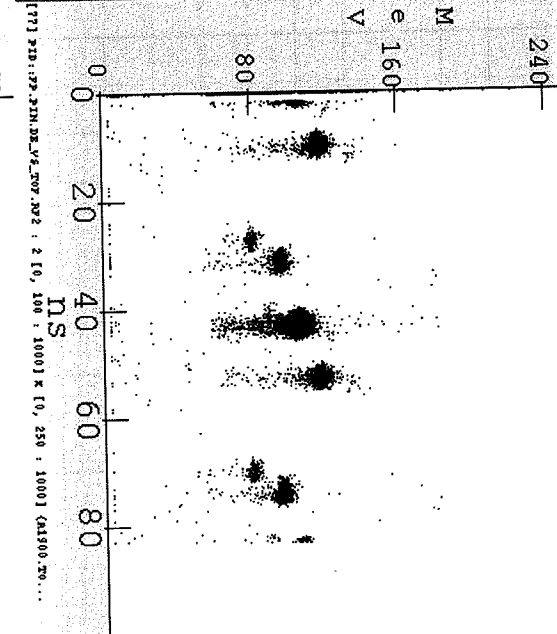
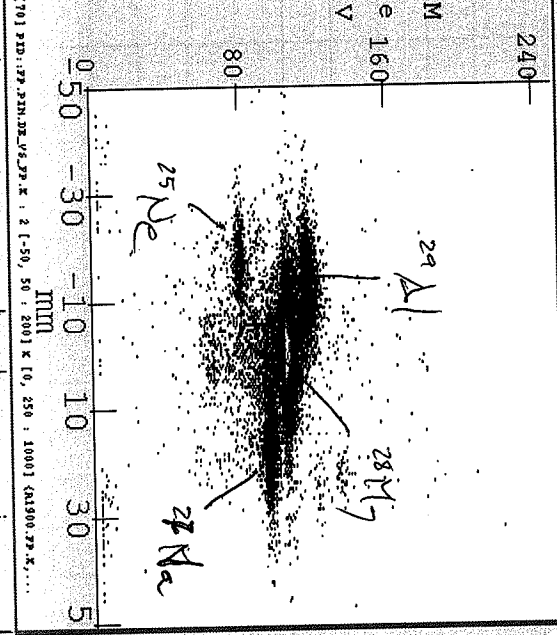
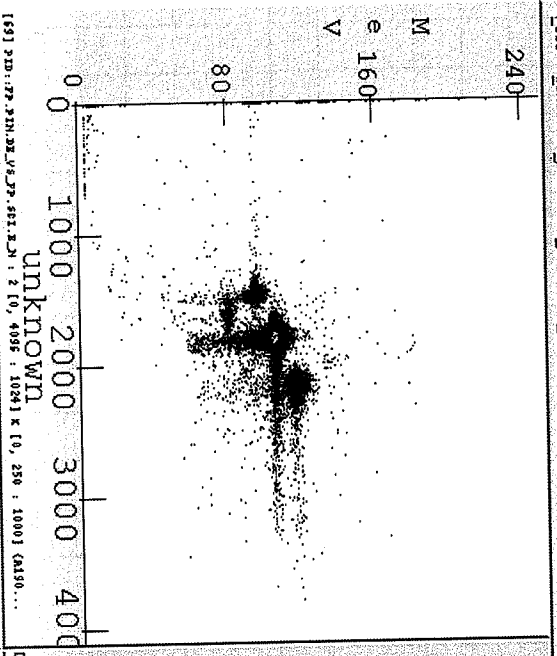
Brett

Jack

Patrick

Run 5603

A1900



Spectrum 74

X 88.74

Y 0.13

Counts 0

Geometry  Zoom  Update All  Expand  Marker  Summing Region  Integrate

Display  Update Selected  UnExpand  Info  Log  Map  Band  Contour

Display +

Camera Photos for Exp 06006

67 1253 5800

67 1253 5800

Z003DV-0.759  
out + out + out + Be 846 + out  
Att 3k [chopper = 1 x 1 pct.]  
1253 2010-06-30 16:08:18

Z003DV-0.759  
out + out + out + Be 846 + out  
Att 3k [chopper = 1 x 1 pct.]  
1253 2010-06-30 15:46:34

Mg-28 beam

No Mg-28 beam

67 1253 5800

67 1253 5800

Z003DV-0.759  
out + out + out + Be 846 + out  
Att 1 [chopper = 0 x 10 pct.]  
1253 2010-06-30 17:03:59

Z003DV-0.759  
out + out + out + Be 846 + out  
Att 1 [chopper = 0 x 10 pct.]  
1253 2010-06-30 17:13:34



Run sheet for experiment e06006			Run # 1	Date 6/30/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles			<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input checked="" type="checkbox"/> Empty frame	Coinc
Comments					

Run sheet for experiment e06006			Run # 2	Date 6/30/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles			<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input checked="" type="checkbox"/> Empty frame	Coinc
Comments tweaked transmission - now 80%, up from 50%					

Run sheet for experiment e06006			Run # 3	Date 6/30/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles			<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.3340				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments <sup>28</sup> Mg centered in FP					

$B_p$  of unreacted <sup>28</sup>Mg = 3.3340

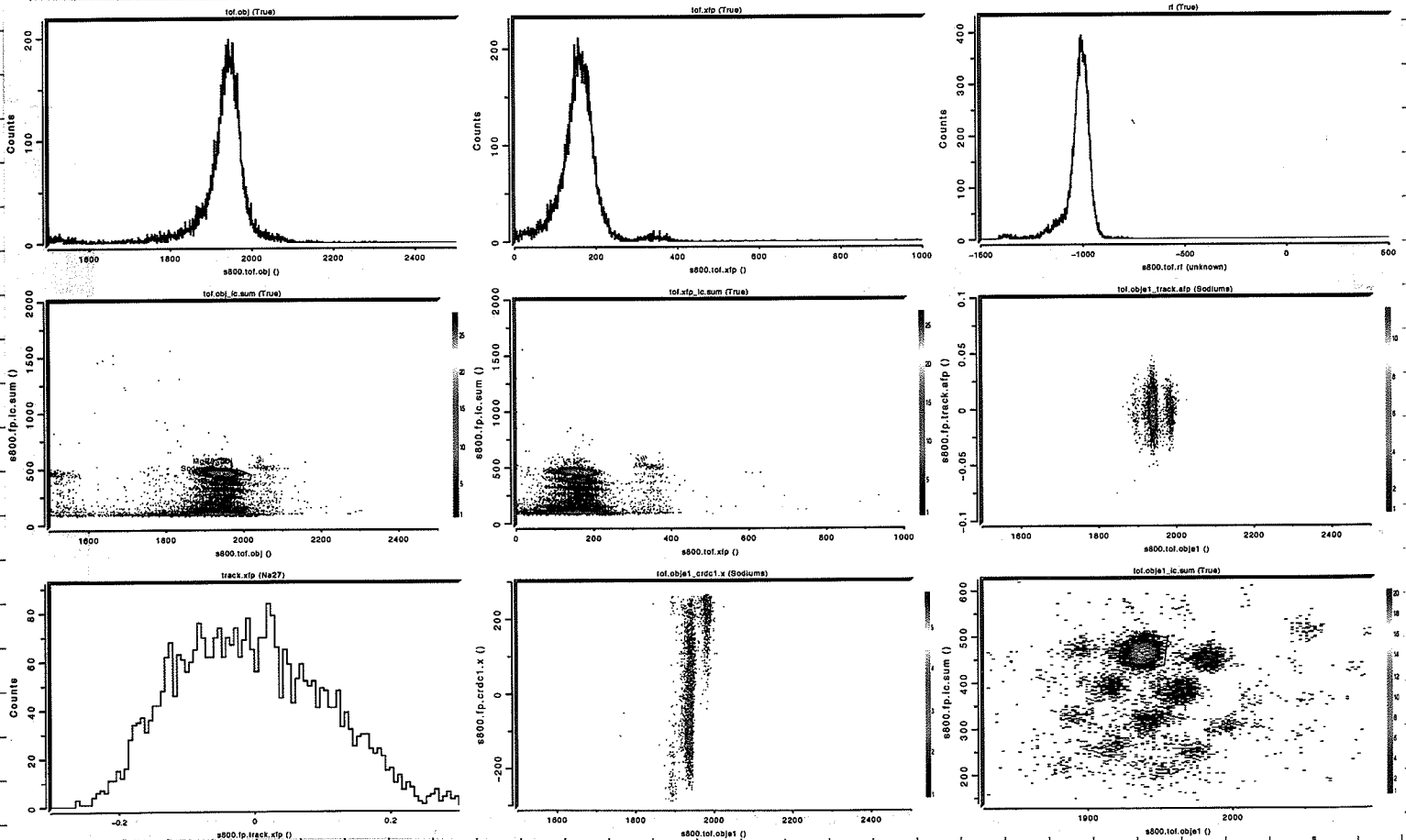
→  $B_p$  of 1p knockout residue <sup>27</sup>Na ; 3.5072

Run sheet for experiment e06006			Run # 4	Date 6/30/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles			<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc

Run sheet for experiment e06006				Run # 5	Date 6/30/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input checked="" type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brho <sub>s</sub> 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments extra short run					

Run sheet for experiment e06006				Run # 6	Date 6/30/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input checked="" type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input checked="" type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brho <sub>s</sub> 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments First run with HiRA turned on					

Run 4



http://groups.nsl.msu.edu/a1900/archive/barney/beamdata/BeamLines/l%20Line/Print30Jun10\_20h00.txt

A1900 "Print30Jun10\_20h00.txt" Wednesday 20:00:21 2010-06-30 A1900  
 Moe\_153 \*\*\* Run 4 - Mg28-1p centered \*\*\*  
 Expt: 06006 "Precise study of 2p knockout" [Daniel Bazin] Line: S800 [8]  
 Beam: 40 Ar 7+ 12.35 MeV/nuc (K500) 18+ 140 MeV/nuc (K1200) Chpr off  
 <Att 1> ECR, Apertures: ARTEMIS 150.0; 15.0; 7.5 mm RHVBI: 24.4300 kV  
 K500 a,b: 640 A, 562 A K1200: 757 A, -101 A RF: 23.18480 MHz  
 A1900 Optics: L19S3I\_Focus60x30.data

Rigidity	Field	Radius	(live)	Difference (Field*Radius)
Seg 0: 3.92158 Tm				
Seg 1: 3.66420 Tm	1.18608 T	3.08924 m	3.08933 m	-0.00283 % (3.66410 Tm)
Seg 2: 3.66420 Tm	1.18558 T	3.09076 m	3.09065 m	0.00357 % (3.66433 Tm)
Seg 3: 3.36200 Tm	1.09002 T	3.08436 m	3.08434 m	0.00071 % (3.36202 Tm)
Seg 4: 3.36200 Tm	1.08940 T	3.08628 m	3.08611 m	0.00557 % (3.36219 Tm)
Seg 5: 3.35260 Tm				
Seg 6: 3.34310 Tm				
Seg 7: 3.34080 Tm				
Seg 8: 3.48972 Tm				
A116DS	1.06940 T	3.13506 m	3.13503 m	0.00105 %
A132DS	-1.04500 T	3.20710 m	3.20823 m	-0.03507 %
A165DS	0.56330 T	5.95149 m	5.95171 m	-0.00371 %
I200DS	1.06493 T	3.13950 m	3.13927 m	0.00741 %
I205DS	1.06793 T	3.13087 m	3.13045 m	0.01346 %
I223DS	0.00000 T	3.03735 m	0.00000 m	100.00000 %
I228DS	1.04829 T	3.18718 m	3.18690 m	0.00856 %
I265DS	1.24572 T	2.80280 m	2.80137 m	0.05122 %
I269DS	1.24578 T	2.80280 m	2.80123 m	0.05604 %

Z001TL: out, Z013TL: out; Z014TL out  
 Z015TL: Be 846, Z016TL out  
 Z030BC Beam Stop: 99.88 mm  
 Z037L,R: -15.00, 14.96 mm or -0.51, 0.51 width= 1.02 %; Z037DC: out  
 Z057MS: 1.0%, Z061MS: out  
 Z059DC: out, Z062SC: out, Z059TL: Al 600  
 Z082 XC,G,YG: 0.16, 203.01, 202.05 mm Z082TL: out  
 Z103DC: out, Z104DC: 130 um BC400 027; Z106DC: out, Z107DC\_U/\_L: out/out  
 Z105TL: out, Slits: nothing installed; PPACs: ; Z107 outlim: Y  
 Z104 XC,G,YC,G: 0.16, 10.20; -0.06, 89.89 mm  
 Slits: I181 XC,G,YC,G: 76.19, 84.40; 464.84,-999.99  
 I187: Obj Sci, I188: out, I189: out, I190: out  
 I213: out, i214: out, I215: out, I216: out  
 I214DC Det Drive: PPACs; I255T: 6.85 B: 3.19 mm; Up/Dn Mask: out/out  
 Scattering Chamber I250X-R/I250Y-R/I251Y-R [mm]: 5.0/ 5.0/200.0  
 I259XM: 0.1096 XP: 0.0000 YM: 0.0000 YP: 1.7182

Run sheet for experiment e06006			Run # 7	Date 6/30/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 1p <input type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input checked="" type="checkbox"/> HiRA singles				<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA				<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments HIRA tuning					

Run sheet for experiment e06006				Run # 8	Date 6/30/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 1p <input type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input checked="" type="checkbox"/> HiRA singles				<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA				<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments MIRA tuning					

Run sheet for experiment e06006				Run # 9	Date 6/30/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 1p <input type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input checked="" type="checkbox"/> HiRA singles				<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA				<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input checked="" type="checkbox"/> Empty frame	Coinc
Comments check of origin of high energy <del>line</del> in HiRA					

Run sheet for experiment e06006				Run # 10	Date 6/30/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 1p <input type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input checked="" type="checkbox"/> HiRA singles				<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA				<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input checked="" type="checkbox"/> Empty frame	Coinc
Comments removed PPACs and obj scin to check for origin of high energy line in HiRA					

Run sheet for experiment e06006				Run # 11	Date 6/30/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 1p <input type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles				<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA				<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments CRDC1 mask calibration					

Run sheet for experiment e06006				Run # 12	Date 6/30/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments CRDC1 mask calibration, sweeping <del>primary</del> unreacted beam					

Run sheet for experiment e06006				Run # 13	Date 6/30/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments CRDC2 mask calibration, sweeping unreacted beam					

Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Ch#
Tow0Card15	290.00 V	4.00 uA	290.50 V	0.52 uA	0n	00.0000	00.0000
Tow0Card12	440.00 V	4.00 uA	441.00 V	1.16 uA	0n	00.0001	00.0003
Tow0Card6	310.00 V	4.00 uA	310.50 V	0.64 uA	0n	00.0004	00.0005
Tow0Card3	395.00 V	4.00 uA	395.25 V	1.16 uA	0n	00.0005	00.0006
Tow1Card15	410.00 V	4.00 uA	410.25 V	1.52 uA	0n	00.0006	00.0008
Tow1Card12	310.00 V	5.00 uA	310.25 V	0.70 uA	0n	00.0008	00.0009
Tow1Card6	420.00 V	4.00 uA	420.00 V	1.28 uA	0n	00.0009	00.0010
Tow1Card3	240.00 V	5.00 uA	240.00 V	1.56 uA	0n	00.0010	00.0011
Tow2Card15	340.00 V	7.00 uA	340.50 V	2.70 uA	0n	00.0011	00.0013
Tow2Card12	300.00 V	6.00 uA	300.25 V	3.68 uA	0n	00.0013	00.0014
Tow2Card6	350.00 V	4.00 uA	350.00 V	1.16 uA	0n	00.0014	00.0015
Tow2Card3	265.00 V	4.00 uA	265.00 V	1.48 uA	0n	00.0015	00.0016
Tow3Card15	300.00 V	4.00 uA	299.75 V	1.26 uA	0n	00.0016	00.0018
Tow3Card12	220.00 V	4.00 uA	219.75 V	1.06 uA	0n	00.0018	00.0019
Tow3Card6	210.00 V	4.00 uA	209.75 V	1.06 uA	0n	00.0019	00.0020
Tow3Card3	450.00 V	4.00 uA	450.25 V	1.26 uA	0n	00.0020	00.0021
Tow4Card15	0.00 V	6.00 uA	5.25 V	0.00 uA	Off	00.0021	00.0023
Tow4Card12	300.00 V	5.00 uA	300.25 V	1.80 uA	0n	00.0023	00.0024
Tow4Card6	220.00 V	5.00 uA	219.50 V	1.46 uA	0n	00.0024	03.0005
Tow4Card3	310.00 V	5.00 uA	309.75 V	0.84 uA	0n	03.0005	03.0011
Cs11	80.00 V	3.0 uA	80.15 V	0.0 uA	0n	03.0011	05.0005
Cs12	80.00 V	3.0 uA	80.05 V	0.4 uA	0n	05.0005	05.0011
Cs13	80.00 V	3.0 uA	79.60 V	0.2 uA	0n	05.0011	
Cs14	80.00 V	10.0 uA	80.05 V	0.2 uA	0n		

10:10 pm  
June 30

xDAQ crashed, incrementing through runs 14 and 15

Run sheet for experiment e06006				Run # 16	Date 6/30/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
3.4897					



Run sheet for experiment e06006				Run # 17	Date 6/30/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc

Comments 1 proton knockout

Run sheet for experiment e06006				Run # 18	Date 6/30/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc

Comments 1 proton knockout, delay adjustments

5:57 pm Tele p8  
 WE 30 p9

$$I = 2.78 \mu A$$

$$I = 3.94 \mu A$$

Run sheet for experiment e06006				Run # 19	Date 7/1/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc

Comments Recdot crashed at the end of this run.

Run sheet for experiment e06006				Run # 20	Date 7/1/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA

Run sheet for experiment e06006			Run # 21	Date 7/1/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 780K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 670K
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 67
Brhos 3.4897				<input type="checkbox"/> Empty frame	HiRA 62
					Coinc 629
Comments Tower 2 Card 12 (P9) error is drastically rising.					

P8 = 2.88 nA @ 3:33 AM (up 100 nA in 3.5 hrs)  
 P9 = 4.20 nA @ 7/1 (up 240 nA in 3.5 hrs)

Run sheet for experiment e06006			Run # 22	Date 7/1/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 1747
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ ~ 0.9 MHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 75
Brhos 3.4897				<input type="checkbox"/> Empty frame	HiRA 450
					Coinc 8
Comments					

Run sheet for experiment e06006			Run # 23	Date 7/1/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 1747
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ ~ 0.9 MHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 76
Brhos 3.4897				<input type="checkbox"/> Empty frame	HiRA 450
					Coinc 8
Comments					

Run sheet for experiment e06006			Run # 24	Date 7/1/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 1747
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 0.9 MHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 70
Brhos 3.4897 Im				<input type="checkbox"/> Empty frame	HiRA 415
					Coinc 12
Comments					

$P8 = 2.92 \mu A$   
 $P9 = 4.30 \mu A$

@ 7:00 AM 7/1

Imp ~~100 nA~~ 40 nA in 3.5 hrs  
 Imp 100 nA in 3.5 hrs

Run sheet for experiment e06006			Run # 25	Date 7/1/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}Mg$	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> $^9Be$ 100 mg/cm <sup>2</sup>	XFP 0.6 MHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1H$	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> $^9Be$ 9 mg/cm <sup>2</sup>	OBJ 0.5 MHz
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}Au$ 20 mg/cm <sup>2</sup>	S800 45
Brhos 3.4897				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 228
				<input type="checkbox"/> Empty frame	Coinc 7
Comments					

Run sheet for experiment e06006			Run # 26	Date 7/1/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> $^{28}Mg$	<input type="checkbox"/> 1p	<input type="checkbox"/> $^9Be$ 100 mg/cm <sup>2</sup>	XFP
<input checked="" type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1H$	<input type="checkbox"/> 2p	<input type="checkbox"/> $^9Be$ 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}Au$ 20 mg/cm <sup>2</sup>	S800
Brhos				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input checked="" type="checkbox"/> Empty frame	Coinc
Comments <del>Call</del> Alpha source calibration					

Run sheet for experiment e06006			Run # 27	Date 7/1/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> $^{28}Mg$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9Be$ 100 mg/cm <sup>2</sup>	XFP
<input checked="" type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1H$	<input type="checkbox"/> 2p	<input type="checkbox"/> $^9Be$ 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}Au$ 20 mg/cm <sup>2</sup>	S800
Brhos				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments Alpha source calibration					

Run sheet for experiment e06006				Run # 28	Date 7 / 1 / 2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input checked="" type="checkbox"/> Empty frame	Coinc
Comments Alpha Source Calibration, 150 mm and 140 mm					

7/1/2010  
11:40AM

Terminal							
File Edit View Terminal Tabs Help							User
- Main Utility Setup Groups View							
Group 03							
Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Ch#
Tow0Card15	290.00 V	4.00 uA	290.50 V	0.54 uA	On		00.0000
Tow0Card12	440.00 V	4.00 uA	440.75 V	1.20 uA	On		00.0001
Tow0Card6	310.00 V	4.00 uA	310.50 V	0.64 uA	On		00.0003
Tow0Card3	395.00 V	4.00 uA	395.25 V	1.18 uA	On		00.0004
Tow1Card15	410.00 V	4.00 uA	410.25 V	1.66 uA	On		00.0005
Tow1Card12	310.00 V	5.00 uA	310.25 V	0.72 uA	On		00.0006
Tow1Card6	420.00 V	4.00 uA	420.00 V	1.34 uA	On		00.0008
Tow1Card3	240.00 V	5.00 uA	240.00 V	1.60 uA	On		00.0009
Tow2Card15	340.00 V	6.00 uA	340.50 V	2.96 uA	On		00.0010
Tow2Card12	300.00 V	6.00 uA	300.25 V	4.38 uA	On		00.0011
Tow2Card6	350.00 V	4.00 uA	350.00 V	1.20 uA	On		00.0013
Tow2Card3	265.00 V	4.00 uA	265.00 V	1.52 uA	On		00.0014
Tow3Card15	300.00 V	4.00 uA	299.75 V	1.28 uA	On		00.0015
Tow3Card12	220.00 V	4.00 uA	220.00 V	1.08 uA	On		00.0016
Tow3Card6	210.00 V	4.00 uA	209.75 V	1.08 uA	On		00.0018
Tow3Card3	450.00 V	4.00 uA	450.25 V	1.52 uA	On		00.0019
Tow4Card15	0.00 V	6.00 uA	5.25 V	0.00 uA	Off		00.0020
Tow4Card12	300.00 V	5.00 uA	300.25 V	1.82 uA	On		00.0021
Tow4Card6	220.00 V	5.00 uA	219.50 V	1.50 uA	On		00.0023
Display/Edit Group 03							N ◊   CAEN SY1527
Tow4Card3	220.00 V	5.00 uA	219.50 V	1.50 uA	On		00.0023
Tow4Card3	310.00 V	5.00 uA	309.75 V	0.86 uA	On		00.0024
CsI1	80.00 V	3.0 uA	80.15 V	0.0 uA	On		03.0005
CsI2	80.00 V	3.0 uA	80.05 V	0.4 uA	On		03.0011
CsI3	80.00 V	3.0 uA	79.60 V	0.2 uA	On		05.0005
CsI4	80.00 V	10.0 uA	80.10 V	0.2 uA	On		05.0011
Display/Edit Group 03							N ◊   CAEN SY1527

Run sheet for experiment e06006				Run # 29	Date / / 2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> <sup>28</sup> Mg <input checked="" type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 1p <input type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input checked="" type="checkbox"/> HiRA singles				<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA				<input checked="" type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments Towers 2+3 were not biased					

Run sheet for experiment e06006				Run # 30	Date / / 2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> <sup>28</sup> Mg <input checked="" type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 1p <input type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 0
<input checked="" type="checkbox"/> HiRA singles				<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 0
<input type="checkbox"/> S800+HiRA				<input checked="" type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 0
Brhos 3.49				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 500
				<input type="checkbox"/> Empty frame	Coinc 0
Comments					

Run sheet for experiment e06006				Run # 31	Date / / 2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> <sup>28</sup> Mg <input checked="" type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 1p <input type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 0
<input checked="" type="checkbox"/> HiRA singles				<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 0
<input type="checkbox"/> S800+HiRA				<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 0
Brhos 3.49				<input checked="" type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA <del>500</del> 750
				<input type="checkbox"/> Empty frame	Coinc 0
Comments					

Run sheet for experiment e06006				Run # 32	Date / / 2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> <sup>28</sup> Mg <input checked="" type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 1p <input type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 0
<input checked="" type="checkbox"/> HiRA singles				<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 0
<input type="checkbox"/> S800+HiRA				<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 0
Brhos 3.49				<input checked="" type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 600
				<input type="checkbox"/> Empty frame	Coinc 0
Comments					



Run sheet for experiment e06006			Run # 33	Date / / 2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 0
<input checked="" type="checkbox"/> HiRA singles		<input checked="" type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 0
<input type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> S800 0	
Brhos 3.49				<input checked="" type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 120
				<input type="checkbox"/> Empty frame	Coinc 0

Comments

Run sheet for experiment e06006			Run # 34	Date / / 2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 0
<input checked="" type="checkbox"/> HiRA singles		<input checked="" type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 0
<input type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> S800 0	
Brhos 3.49				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 100
				<input type="checkbox"/> Empty frame	Coinc 0

Comments

changed target

Run sheet for experiment e06006			Run # 35	Date / / 2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 0
<input checked="" type="checkbox"/> HiRA singles		<input checked="" type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 0
<input type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> S800 0	
Brhos 3.49				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 110
				<input type="checkbox"/> Empty frame	Coinc 0

Comments

changed target

Run sheet for experiment e06006			Run # 36	Date / / 2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input checked="" type="checkbox"/> HiRA singles		<input checked="" type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> S800	
Brhos 3.49			+ CH <sub>2</sub> 75 μm	<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc

Comments

↑  
upstream target

Flush Chiller

Run sheet for experiment e06006			Run # 37	Date 7/1/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input checked="" type="checkbox"/> HiRA singles		<input checked="" type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brho <sub>8</sub> 3.4897				<input checked="" type="checkbox"/> CH <sub>2</sub> <sup>75</sup> 100 μm	HiRA 725
				<input type="checkbox"/> Empty frame	Coinc
Comments Hira calibrations					

9:53 PM

Terminal

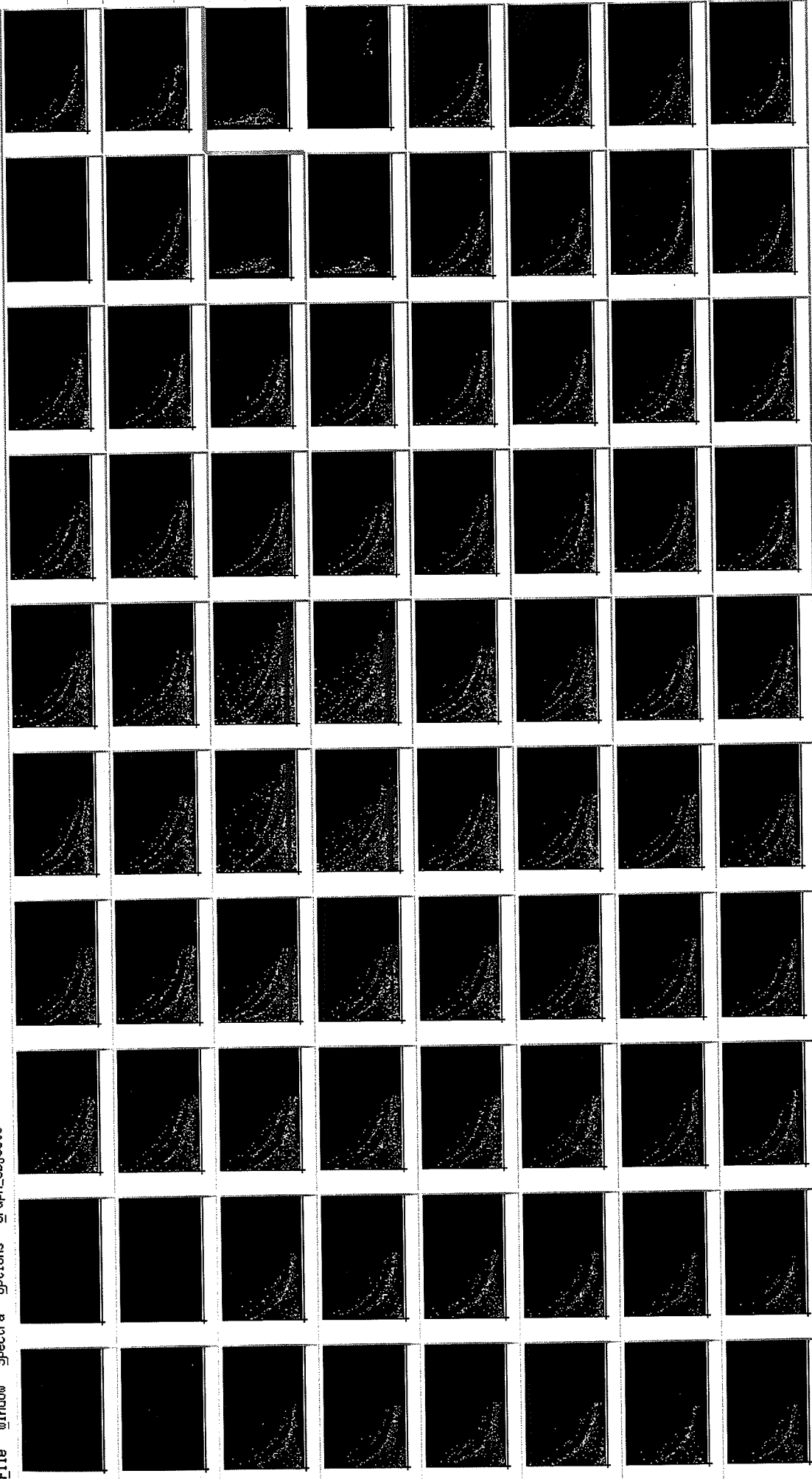
File Edit View Terminal Tabs Help

- Main Utility Setup Groups View

Group 03

Channel Name	V0Set	I0Set	VMon	I0Mon	Pw	Status	Ch#
Tow0Card15	290.00 V	4.00 uA	290.50 V	0.54 uA	On		00.0000
Tow0Card12	440.00 V	4.00 uA	441.00 V	1.20 uA	On		00.0001
Tow0Card6	310.00 V	4.00 uA	310.50 V	0.66 uA	On		00.0003
Tow0Card3	395.00 V	4.00 uA	395.25 V	1.20 uA	On		00.0004
Tow1Card15	410.00 V	4.00 uA	410.25 V	1.72 uA	On		00.0005
Tow1Card12	310.00 V	5.00 uA	310.25 V	0.74 uA	On		00.0006
Tow1Card6	420.00 V	4.00 uA	420.00 V	1.36 uA	On		00.0008
Tow1Card3	240.00 V	5.00 uA	240.00 V	1.62 uA	On		00.0009
Tow2Card15	340.00 V	6.00 uA	340.50 V		On		00.0010
Tow2Card12	300.00 V	6.00 uA	300.25 V		On		00.0011
Tow2Card6	350.00 V	4.00 uA	350.00 V	1.22 uA	On		00.0013
Tow2Card3	265.00 V	4.00 uA	265.00 V	1.54 uA	On		00.0014
Tow3Card15	300.00 V	4.00 uA	299.75 V	1.30 uA	On		00.0015
Tow3Card12	220.00 V	4.00 uA	220.00 V	1.10 uA	On		00.0016
Tow3Card6	210.00 V	4.00 uA	209.75 V	1.10 uA	On		00.0018
Tow3Card3	450.00 V	4.00 uA	450.25 V	1.62 uA	On		00.0019
Tow4Card15	350.00 V	5.00 uA	5.50 V	0.00 uA	Off		00.0020
Tow4Card12	300.00 V	5.00 uA	300.25 V	1.84 uA	On		00.0021
Tow4Card6	220.00 V	5.00 uA	219.50 V	1.52 uA	On		00.0023
Display/Edit Group 03							
Tow4Card3	310.00 V	5.00 uA	309.75 V	0.88 uA	On		00.0024
CsI1	80.00 V	3.0 uA	80.15 V	0.0 uA	On		03.0005
CsI2	80.00 V	3.0 uA	80.00 V	0.4 uA	On		03.0011
CsI3	80.00 V	3.0 uA	79.60 V	0.2 uA	On		05.0005
CsI4	80.00 V	10.0 uA	80.05 V	0.2 uA	On		05.0011
Display/Edit Group 03							

N ♦ CAEN SY1527



Spectrum 53 X 58.32 Y 19.18 Counts 0

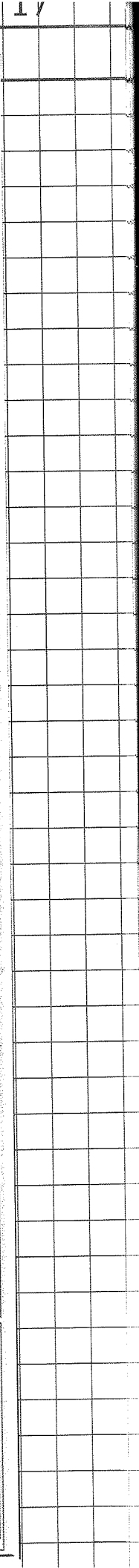
Geometry  Zoom  Display  Display +

Update All  Update Selected  Info +  -  Log  Map

Expand  UnExpand

Marker  Summing Region  Integrate

Exit  Band  Contour

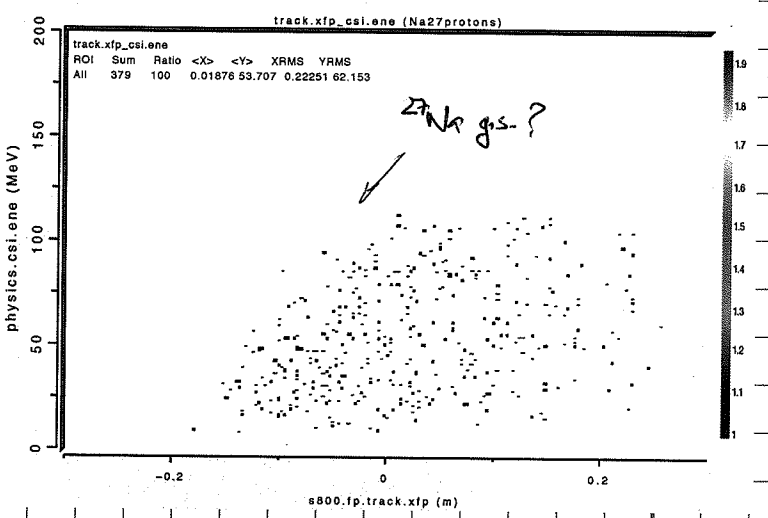
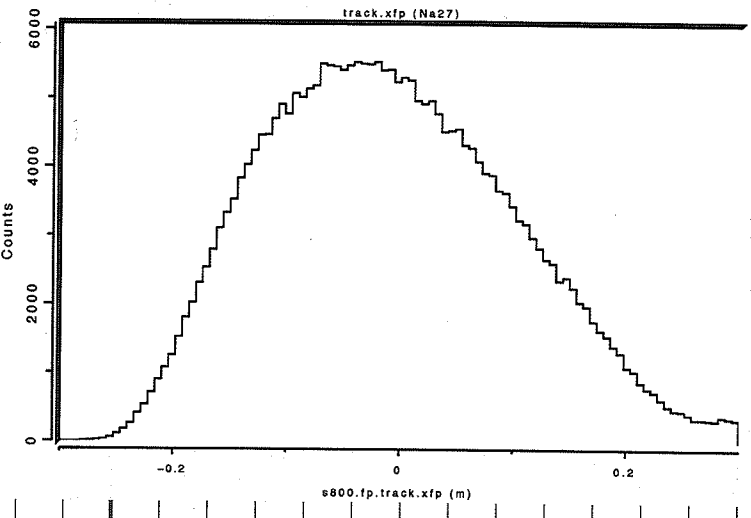
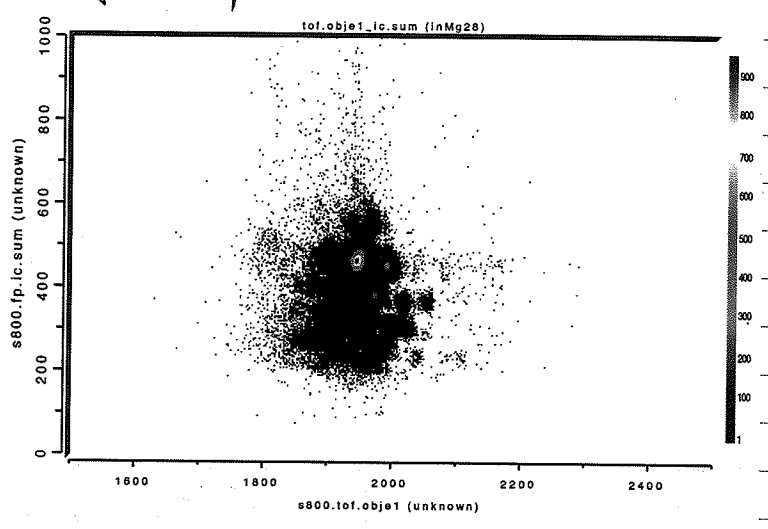
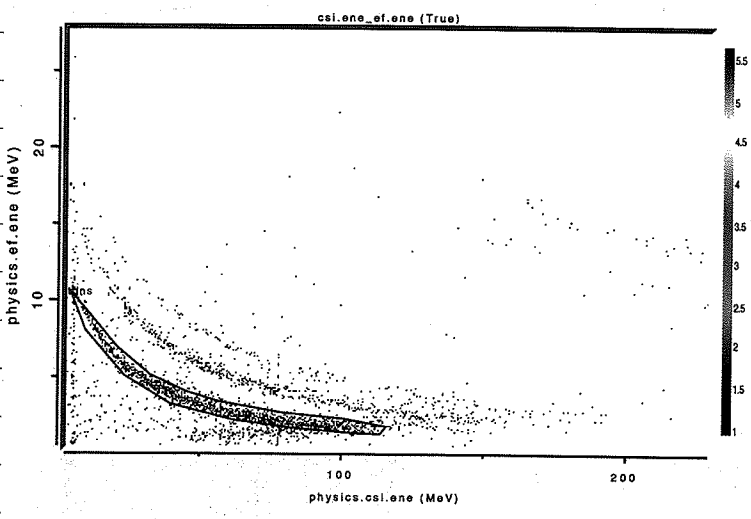


Run sheet for experiment e06006			Run # 38	Date 7/1/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	:1	<input type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input checked="" type="checkbox"/> HiRA singles		<input checked="" type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.4897				<input checked="" type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input checked="" type="checkbox"/> <sup>blank</sup> Empty frame	Coinc
Comments calibrations					

Run sheet for experiment e06006			Run # 39	Date 7/1/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	:1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.2803				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments					

Run sheet for experiment e06006			Run # 40	Date 7/2/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	:1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.6660				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input type="checkbox"/> Empty frame	Coinc
Comments First good 1hr run on 2p KO settings					

Cumulated  $^{28}\text{Mg} - 1p$



Run sheet for experiment e06006			Run # 41	Date 7 / 2 / 2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^{9}\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 960 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 790 kHz
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 50
Brhos 3.6660				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 2400
				<input type="checkbox"/> Empty frame	Coinc 14
Comments					



Run sheet for experiment e06006			Run # 42	Date 7/2/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 1p <input checked="" type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup> <input type="checkbox"/> CH <sub>2</sub> 100 μm <input type="checkbox"/> Empty frame	XFP 870 K
<input type="checkbox"/> HiRA singles					OBJ 730 K
<input checked="" type="checkbox"/> S800+HiRA					S800 54
Brhos 3-6660					HiRA 2100
					Coinc 13
Comments					

Run sheet for experiment e06006			Run # 43	Date 7/2/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 1p <input checked="" type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup> <input type="checkbox"/> CH <sub>2</sub> 100 μm <input type="checkbox"/> Empty frame	XFP 900 K
<input type="checkbox"/> HiRA singles					OBJ 770 K
<input checked="" type="checkbox"/> S800+HiRA					S800 54
Brhos 3-6660					HiRA 2300
					Coinc 15
Comments					

Run sheet for experiment e06006			Run # 44	Date 7/2/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg <input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 1p <input checked="" type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup> <input type="checkbox"/> CH <sub>2</sub> 100 μm <input type="checkbox"/> Empty frame	XFP 800 K
<input type="checkbox"/> HiRA singles					OBJ 630 K
<input checked="" type="checkbox"/> S800+HiRA					S800 55
Brhos 3-6660					HiRA 1970
					Coinc 15
Comments					

4:40 AM

Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Ch#
Tow0Card15	290.00 V	4.00 uA	290.50 V	0.54 uA	On		00.0000
Tow0Card12	440.00 V	4.00 uA	441.00 V	1.20 uA	On		00.0001
Tow0Card6	310.00 V	4.00 uA	310.50 V	0.66 uA	On		00.0003
Tow0Card3	395.00 V	4.00 uA	395.25 V	1.20 uA	On		00.0004
Tow1Card15	410.00 V	4.00 uA	410.25 V	1.76 uA	On		00.0005
Tow1Card12	310.00 V	5.00 uA	310.25 V	0.74 uA	On		00.0006
Tow1Card6	420.00 V	4.00 uA	420.00 V	1.38 uA	On		00.0008
Tow1Card3	240.00 V	5.00 uA	240.00 V	1.62 uA	On		00.0009
Tow2Card15	340.00 V	6.00 uA	340.50 V	3.00 uA	On		00.0010
Tow2Card12	300.00 V	6.00 uA	300.25 V	3.42 uA	On		00.0011
Tow2Card6	350.00 V	4.00 uA	350.00 V	1.20 uA	On		00.0013
Tow2Card3	265.00 V	4.00 uA	265.00 V	1.52 uA	On		00.0014
Tow3Card15	300.00 V	4.00 uA	299.75 V	1.30 uA	On		00.0015
Tow3Card12	220.00 V	4.00 uA	220.00 V	1.10 uA	On		00.0016
Tow3Card6	210.00 V	4.00 uA	209.75 V	1.10 uA	On		00.0018
Tow3Card3	450.00 V	4.00 uA	450.25 V	1.66 uA	On		00.0019
Tow4Card15	350.00 V	5.00 uA	5.50 V	0.00 uA	Off		00.0020
Tow4Card12	300.00 V	5.00 uA	300.25 V	1.86 uA	On		00.0021
Tow4Card6	220.00 V	5.00 uA	219.50 V	1.52 uA	On		00.0023
Display/Edit Group 03					LocEn V0 I0	N ◊ CAEN SY1527	
Tow4Card3	310.00 V	5.00 uA	309.75 V	0.90 uA	On		00.0024
CsI1	80.00 V	3.0 uA	80.15 V	0.0 uA	On		03.0005
CsI2	80.00 V	3.0 uA	80.00 V	0.4 uA	On		03.0011
CsI3	80.00 V	3.0 uA	79.60 V	0.2 uA	On		05.0005
CsI4	80.00 V	10.0 uA	80.05 V	0.2 uA	On		05.0011
Display/Edit Group 03					LocEn V0 I0	N ◊ CAEN SY1527	

Run sheet for experiment e06006				Run # 45	Date 7/2/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 693 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 554 K
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 47
Brhos 3-6660				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 1670
				<input type="checkbox"/> Empty frame	Coinc 12
Comments					

We were informed at 6:00 AM that the vacuum in K1200 is getting bad. The operators took the beam out to work on a patch. At this time readout froze — rebooted both ulepc3 and spdag20 machines to get it working again.

Run sheet for experiment e06006				Run # 46	Date 1 / / 2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	:1	<input type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800
Brhos				<input type="checkbox"/> Empty frame	HiRA
Comments					

Got beam back ~ 8:30 am.

Run sheet for experiment e06006				Run # 48	Date 7/2 / 2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	:1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 922 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 751 K
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 58
Brhos 3.6660				<input type="checkbox"/> Empty frame	HiRA 2961
Comments					

Run sheet for experiment e06006				Run # 49	Date 7/2 / 2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	:1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 890 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 780 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 61
Brhos 3.6660				<input type="checkbox"/> Empty frame	HiRA 2.8k
Comments					

Run sheet for experiment e06006				Run # 50	Date 7/2 / 2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	:1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 820 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 750 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 62
Brhos 3.6660				<input type="checkbox"/> Empty frame	HiRA 2762
Comments					

Run sheet for experiment e06006				Run # 51	Date 7/2/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 766 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 642 K
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 58	
Brhos 3.6660			<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 2.9K	
			<input type="checkbox"/> Empty frame	Coinc 12	
Comments					

Run sheet for experiment e06006				Run # 52	Date 7/2/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 884 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 845 KHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 56	
Brhos 3.6660			<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 2785	
			<input type="checkbox"/> Empty frame	Coinc 15	
Comments					

Run sheet for experiment e06006				Run # 53	Date 7/2/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 747 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 682 KHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 48	
Brhos 3.6660 Tm			<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 2.4 KHz	
			<input type="checkbox"/> Empty frame	Coinc 13	
Comments					

Run sheet for experiment e06006				Run # 54	Date 7/2/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 764 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 690 K
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 45	
Brhos 3.6660			<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 2.4 K	
			<input type="checkbox"/> Empty frame	Coinc 8	
Comments					

Run sheet for experiment e06006				Run # 55	Date 7/2/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 714 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 637 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 38
Brhos 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA 2.2 kHz
Comments					

Gave beam back for return, rates 1 week

Now we have beam back. They fixed sparking inflector and returned. 770 eV ~10 on CRAB 06

Run sheet for experiment e06006				Run # 56	Date 7/2/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 933 kHz
<input checked="" type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 933 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 60
Brhos 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA 3.1 kHz
Comments					

Run sheet for experiment e06006				Run # 57	Date 7/2/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 770 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 640 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 43 Hz
Brhos 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA 2.5 kHz
Comments					

Run sheet for experiment e06006				Run # 58	Date 7/2/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 855 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 841 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 56 Hz
Brhos 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA 2.9 kHz
Comments					



Run sheet for experiment e06006				Run # 59	Date 7/21/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 900 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 800 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 70 Hz
Brho <sub>s</sub> 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA 2.4 kHz
Comments					

Run sheet for experiment e06006				Run # 60	Date 7/21/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 850 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 770 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 64 Hz
Brho <sub>s</sub> 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA 3 kHz
Comments					

Run sheet for experiment e06006				Run # 61	Date 7/21/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 951 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 858 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 56 Hz
Brho <sub>s</sub> 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA 3.1 kHz
Comments					

Checked CAEN V & leak I.  
 Similar to printout @ 4:40 AM on pg. 21

Run sheet for experiment e06006				Run # 62	Date 7/31/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 900 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 820 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 68 Hz (?)
Brho <sub>s</sub> 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA 3 kHz
Comments					

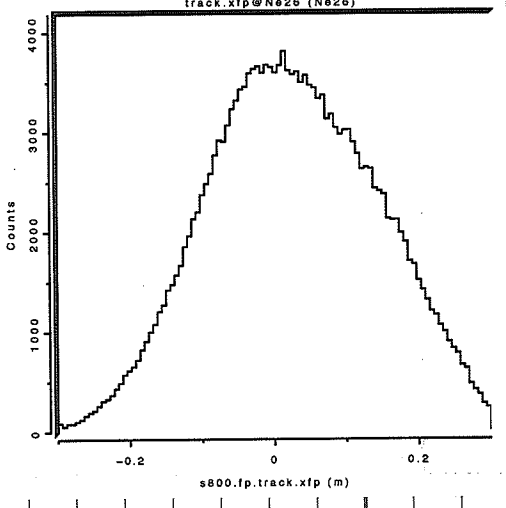
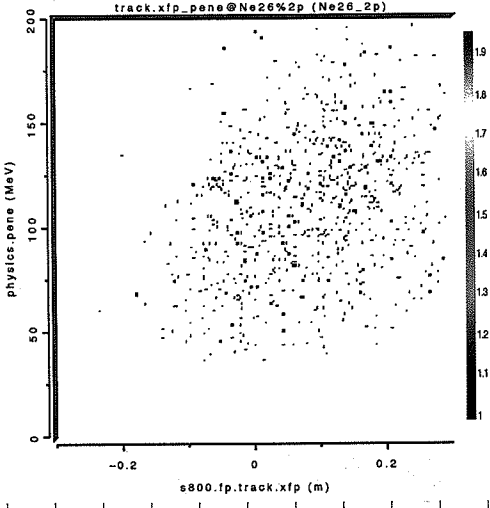
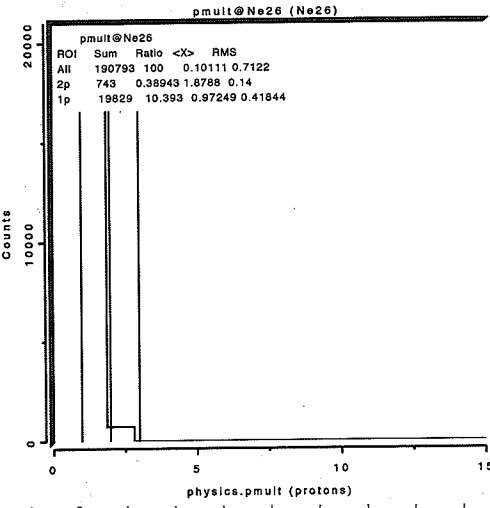
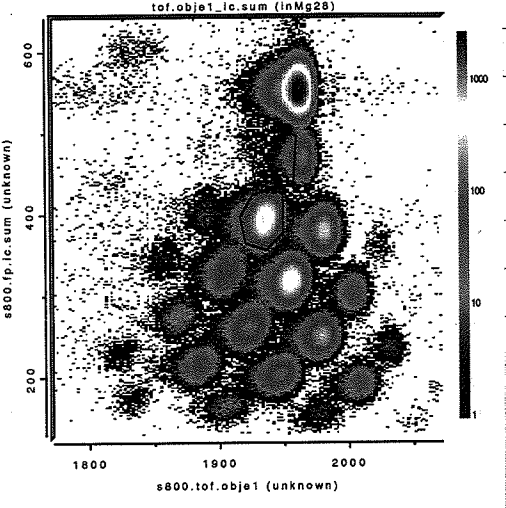
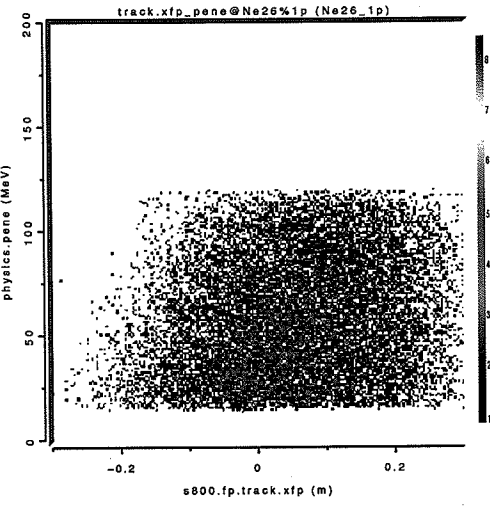
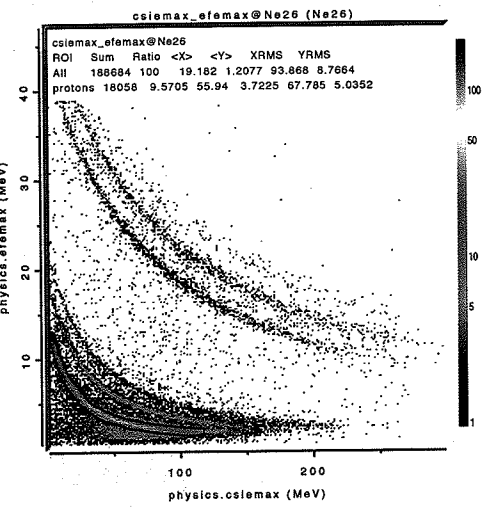
Run sheet for experiment e06006				Run # 63	Date 7/3/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	/	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 220 k
<input type="checkbox"/> HiRA singles	:	<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 780 k
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 60
Brho <sub>8</sub> 3.666				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 2600
				<input type="checkbox"/> Empty frame	Coinc 10
Comments					

XFP efficiency : 95%

OBJ ——— : 95%

Run sheet for experiment e06006				Run # 64	Date 7/3/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	:	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 700 k
<input type="checkbox"/> HiRA singles	:	<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 600 k
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 50
Brho <sub>8</sub> 3.666				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 2700
				<input type="checkbox"/> Empty frame	Coinc 9
Comments					

Runs 40-61 ~ 20 hours



740 <sup>26</sup>Ne - 2p events

4:08 AM

Run sheet for experiment e06006				Run # 65	Date 7/31/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 720 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 610 K
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 52
Brhos 3.666				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 2600
				<input type="checkbox"/> Empty frame	Coinc 12

Comments

4:15 AM \* Beam operators said they would like to check the tune but said it would be no rush. They returned 15 minutes later to say they were no longer concerned with the beam and we could continue without interruption.

4:15 AM

Terminal							
File Edit View Terminal Tabs Help							User
Main Utility Setup Groups View							
Group 03							
Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Ch#
Tow0Card15	290.00 V	4.00 uA	290.50 V	0.54 uA	On		00.0000
Tow0Card12	440.00 V	4.00 uA	441.00 V	1.20 uA	On		00.0001
Tow0Card6	310.00 V	4.00 uA	310.50 V	0.66 uA	On		00.0003
Tow0Card3	395.00 V	4.00 uA	395.25 V	1.20 uA	On		00.0004
Tow1Card15	410.00 V	4.00 uA	410.25 V	1.84 uA	On		00.0005
Tow1Card12	310.00 V	5.00 uA	310.25 V	0.74 uA	On		00.0006
Tow1Card6	420.00 V	4.00 uA	420.00 V	1.46 uA	On		00.0008
Tow1Card3	240.00 V	5.00 uA	240.00 V	1.64 uA	On		00.0009
Tow2Card15	340.00 V	6.00 uA	340.50 V	3.04 uA	On		00.0010
Tow2Card12	300.00 V	6.00 uA	300.25 V	4.50 uA	On		00.0011
Tow2Card6	350.00 V	4.00 uA	350.00 V	1.20 uA	On		00.0013
Tow2Card3	265.00 V	4.00 uA	265.00 V	1.54 uA	On		00.0014
Tow3Card15	300.00 V	4.00 uA	299.75 V	1.30 uA	On		00.0015
Tow3Card12	220.00 V	4.00 uA	220.00 V	1.10 uA	On		00.0016
Tow3Card6	210.00 V	4.00 uA	209.75 V	1.10 uA	On		00.0018
Tow3Card3	450.00 V	4.00 uA	450.25 V	1.80 uA	On		00.0019
Tow4Card15	350.00 V	5.00 uA	5.50 V	0.00 uA	Off		00.0020
Tow4Card12	300.00 V	5.00 uA	300.25 V	1.86 uA	On		00.0021
Tow4Card6	220.00 V	5.00 uA	219.50 V	1.54 uA	On		00.0023
Tow4Card3	310.00 V	5.00 uA	309.75 V	0.90 uA	On		00.0024
CsI1	80.00 V	3.0 uA	80.15 V	0.0 uA	On		03.0005
CsI2	80.00 V	3.0 uA	80.00 V	0.4 uA	On		03.0011
CsI3	80.00 V	3.0 uA	79.60 V	0.2 uA	On		05.0005
CsI4	80.00 V	10.0 uA	80.05 V	0.3 uA	On		05.0011

Display/Edit Group 03 LocEn V0 I0 N \* CAEN SY1527

Leakage currents appear stable over last 24 hrs.

5:15 AM

Run sheet for experiment e06006			Run # 66	Date 7/3/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 820 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 760 K
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 55
Brho <sub>8</sub>	3.666			<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 2900
				<input type="checkbox"/> Empty frame	Coinc 10
Comments					

6:15 AM

DAQ crashed at the conclusion of Run 66. I restarted the daq but it was not taking buffers. We had to reboot spdaq 20. We then restarted the daq and scalers and everything appears back to normal.

6:25 AM

Run sheet for experiment e06006			Run # 67	Date 7/31/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 815 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 750 K
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 66
Brhos 3.666				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 2800
				<input type="checkbox"/> Empty frame	Coinc 12
Comments					

We noticed that the scalers froze during the run so we ended the run. We tried restarting the daq but this didn't help so we rebooted spdaq 20 again. This only worked for a minute before the daq stopped taking data.

We manually rebooted spdaq 20 and cycled the power on the crates for HiRA and the S800.

We did a reboot of DataV pc2 and pc3. Most likely a weird spectrodaq somewhere was the problem

- login 07037 (without e)
- on v6pc3 : cd elogSync ; ./elogServer
- cd elogSync ; ./elogClient
- on v6pc3 : godaq ; goscalers

Run sheet for experiment e06006				Run # 72	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 770 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 720 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 57 Hz
Brhos 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA 2.6 kHz
Comments XFP eff: 95% OBJ Eff: 94%					

We noticed that Daniel's spectol has a different run # than what the daq shows (off by 4), but the data appears to be writing correctly as viewed from the daq run #.

This issue of run numbers not matching was resolved at the start of run 73.

9:40 AM

Run sheet for experiment e06006				Run # 73	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 790 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 680 K
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 55
Brhos 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA 2700
Comments XFP Eff = 95.1% OBJ Eff = 93.7%					

10:40 AM

Run sheet for experiment e06006				Run # 74	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 900 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 800 K
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 70
Brhos 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA 3000
Comments XFP Efficiency = 94.4% OBJ Eff = 92.8%					



11:39 AM

Run sheet for experiment e06006				Run # 75	Date 7/3/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 900 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 815 K
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 70	
Brhos 3.6660 Tm			<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 3,000	
			<input type="checkbox"/> Empty frame	Coinc 12	

Comments XFP Eff = 94.8%

OBJ Eff = 92.8%

Run sheet for experiment e06006				Run # 76	Date 7/3/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 980 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 855 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 70 Hz	
Brhos 3.6660 Tm			<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 3.2 kHz	
			<input type="checkbox"/> Empty frame	Coinc 15 Hz	

Comments OBJ: 0.930 XFP 0.948

Run sheet for experiment e06006				Run # 77	Date 7/3/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 969 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 887 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 63 Hz	
Brhos 3.6660 Tm			<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 3.4 kHz	
			<input type="checkbox"/> Empty frame	Coinc 12 Hz	

Comments OBJ: 0.930 XFP: 0.946

Run sheet for experiment e06006				Run # 78	Date 7/3/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 931 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 845 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 76 Hz	
Brhos 3.666 Tm			<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 3.2 kHz	
			<input type="checkbox"/> Empty frame	Coinc 10	

Comments

XFP: 0.944 OBJ: 0.929

Run sheet for experiment e06006				Run # 79	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 950 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 840 kHz
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 56
Brhos 3-666				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 3.3 kHz
				<input type="checkbox"/> Empty frame	Coinc 15

Comments

Run sheet for experiment e06006				Run # 80	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.3408 Tm				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input checked="" type="checkbox"/> Empty frame	Coinc

Comments CRDC1 mask calibration

Run sheet for experiment e06006				Run # 81	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos 3.3408 Tm				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input checked="" type="checkbox"/> Empty frame	Coinc

Comments CRDC2 mask calibration

Run sheet for experiment e06006				Run # 82	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA			<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800
Brhos				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA
				<input checked="" type="checkbox"/> Empty frame	Coinc

Comments TPPAC1 mask calibration

Run sheet for experiment e06006				Run # 83	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA		<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800	
Brhos				<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA
				<input checked="" type="checkbox"/> Empty frame	Coinc
Comments TPPAC2 mask calibration					

Run sheet for experiment e06006				Run # 84	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ
<input type="checkbox"/> S800+HiRA		<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800	
Brhos 3.3408 Tm				<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA
				<input checked="" type="checkbox"/> Empty frame	Coinc
Comments rate calibration					

Run sheet for experiment e06006				Run # 85	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 820 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 780 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 70 Hz	
Brhos 3.4897 Tm				<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 1805 Hz
				<input type="checkbox"/> Empty frame	Coinc 10 Hz
Comments one proton knockout					

Run sheet for experiment e06006				Run # 86	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 880 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 800 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 69 Hz	
Brhos 3.4897 Tm				<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 2 kHz
				<input type="checkbox"/> Empty frame	Coinc 7.5 Hz
Comments one proton knockout					

Run sheet for experiment e06006				Run # 87	Date 7/3/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	:1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 790 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 710 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 69 Hz
Brhos 3.4897 Tm				<input type="checkbox"/> Empty frame	HiRA 1500 Hz
Comments 1p knockout					

Terminal

File Edit View Terminal Tabs Help

- Main Utility Setup Groups View Admin

Group 03

Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Ch#
Tow0Cart15	290.00 V	4.00 uA	290.50 V	0.54 uA	On		00.0000
Tow0Card12	440.00 V	4.00 uA	441.00 V	1.22 uA	On		00.0001
Tow0Card6	310.00 V	4.00 uA	310.50 V	0.66 uA	On		00.0003
Tow0Card3	395.00 V	4.00 uA	395.25 V	1.20 uA	On		00.0004
Tow1Card15	410.00 V	4.00 uA	410.25 V	1.90 uA	On		00.0005
Tow1Card12	310.00 V	5.00 uA	310.25 V	0.72 uA	On		00.0006
Tow1Card6	420.00 V	4.00 uA	420.00 V	1.52 uA	On		00.0008
Tow1Card3	240.00 V	5.00 uA	240.00 V	1.64 uA	On		00.0009
Tow2Card15	340.00 V	6.00 uA	340.50 V	3.06 uA	On		00.0010
Tow2Card12	300.00 V	6.00 uA	300.25 V	4.54 uA	On		00.0011
Tow2Card6	350.00 V	4.00 uA	350.00 V	1.22 uA	On		00.0013
Tow2Card3	265.00 V	4.00 uA	265.00 V	1.54 uA	On		00.0014
Tow3Card15	300.00 V	4.00 uA	299.75 V	1.30 uA	On		00.0015
Tow3Card12	220.00 V	4.00 uA	220.00 V	1.10 uA	On		00.0016
Tow3Card6	210.00 V	4.00 uA	209.75 V	1.10 uA	On		00.0018
Tow3Card3	450.00 V	4.00 uA	450.25 V	1.86 uA	On		00.0019
Tow4Card15	350.00 V	5.00 uA	5.50 V	0.00 uA	Off		00.0020
Tow4Card12	300.00 V	5.00 uA	300.25 V	1.86 uA	On		00.0021
Tow4Card6	220.00 V	5.00 uA	219.50 V	1.54 uA	On		00.0023
Tow4Card3	310.00 V	5.00 uA	309.75 V	0.92 uA	On		00.0024
CsI1	80.00 V	3.0 uA	80.15 V	0.0 uA	On		03.0005
CsI2	80.00 V	3.0 uA	80.00 V	0.4 uA	On		03.0011
CsI3	80.00 V	3.0 uA	79.55 V	0.2 uA	On		05.0005
CsI4	80.00 V	10.0 uA	80.05 V	0.2 uA	On		05.0011

Display/Edit Group 03 LocEn V0 I0 N ◊ CAEN SY1527

Run sheet for experiment e06006			Run # 88	Date 7/3/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> $^9\text{Be}$ 100 mg/cm $^2$	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> $^9\text{Be}$ 9 mg/cm $^2$	OBJ
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm $^2$	<input type="checkbox"/> CH $_2$ 100 $\mu\text{m}$	S800
Brhos 3.4897				<input type="checkbox"/> Empty frame	HiRA
					Coinc
Comments no beam - <del>not</del> lost vacuum.					

Run sheet for experiment e06006			Run # 89	Date 7/3/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> $^9\text{Be}$ 100 mg/cm $^2$	XFP 905 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> $^9\text{Be}$ 9 mg/cm $^2$	OBJ 819 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm $^2$	<input type="checkbox"/> CH $_2$ 100 $\mu\text{m}$	S800 77
Brhos 3.4897				<input type="checkbox"/> Empty frame	HiRA 1472
					Coinc 8.5
Comments					

Run sheet for experiment e06006			Run # 90	Date 7/4/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> $^9\text{Be}$ 100 mg/cm $^2$	<del>XFP</del> 750 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> $^9\text{Be}$ 9 mg/cm $^2$	<del>OBJ</del> 830 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm $^2$	<input type="checkbox"/> CH $_2$ 100 $\mu\text{m}$	S800 80
Brhos 3.4897				<input type="checkbox"/> Empty frame	HiRA 1,400.
					Coinc 9
Comments					

Thermo couples & Voltages on HiRA okay.  
Printed Barney. Confirmed target  
position is correct. All is well.

Pressure falling in chamber  $\rightarrow$  2.9  $\mu\text{T}$

RUN 911

DAR crashed @ end of run.

00:40  
AM

Run sheet for experiment e06006			Run # 92	Date 7/4/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 900 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 815 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 70
Brhos 3.4897				<input type="checkbox"/> Empty frame	HiRA 1350
Comments First run after RunControl crash.					

Run sheet for experiment e06006			Run # 93	Date 7/4/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 777 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 704 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 60
Brhos 3.4897				<input type="checkbox"/> Empty frame	HiRA 1150
Comments					

Run sheet for experiment e06006			Run # 94	Date 7/4/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 815 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 747 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 83 kHz
Brhos 3.4897				<input type="checkbox"/> Empty frame	HiRA 1.26 kHz
Comments $\sqrt{FP} \approx 0.937 \approx 0.937$					



4:00 AM

Terminal

File Edit View Terminal Tabs Help

- Main Utility Setup Groups View Admin

Group 03

Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Ch#
Tow0Card15	290.00 V	4.00 uA	290.50 V	0.54 uA	On		00.0000
Tow0Card12	440.00 V	4.00 uA	441.00 V	1.22 uA	On		00.0001
Tow0Card6	310.00 V	4.00 uA	310.50 V	0.66 uA	On		00.0003
Tow0Card3	395.00 V	4.00 uA	395.25 V	1.20 uA	On		00.0004
Tow1Card15	410.00 V	4.00 uA	410.25 V	1.90 uA	On		00.0005
Tow1Card12	310.00 V	5.00 uA	310.25 V	0.72 uA	On		00.0006
Tow1Card6	420.00 V	4.00 uA	420.00 V	1.54 uA	On		00.0008
Tow1Card3	240.00 V	5.00 uA	240.00 V	1.64 uA	On		00.0009
Tow2Card15	340.00 V	6.00 uA	340.50 V	3.04 uA	On		00.0010
Tow2Card12	300.00 V	6.00 uA	300.25 V	4.52 uA	On		00.0011
Tow2Card6	350.00 V	4.00 uA	350.00 V	1.22 uA	On		00.0013
Tow2Card3	265.00 V	4.00 uA	265.00 V	1.54 uA	On		00.0014
Tow3Card15	300.00 V	4.00 uA	299.75 V	1.30 uA	On		00.0015
Tow3Card12	220.00 V	4.00 uA	220.00 V	1.10 uA	On		00.0016
Tow3Card6	210.00 V	4.00 uA	209.75 V	1.10 uA	On		00.0018
Tow3Card3	450.00 V	4.00 uA	450.25 V	1.90 uA	On		00.0019
Tow4Card15	350.00 V	5.00 uA	5.50 V	0.00 uA	Off		00.0020
Tow4Card12	300.00 V	5.00 uA	300.25 V	1.86 uA	On		00.0021
Tow4Card6	220.00 V	5.00 uA	219.50 V	1.54 uA	On		00.0023
CsI2	80.00 V	3.0 uA	80.00 V	0.4 uA	On		03.0011
CsI3	80.00 V	3.0 uA	79.55 V	0.2 uA	On		05.0005
CsI4	80.00 V	10.0 uA	80.05 V	0.2 uA	On		05.0011

Display/Edit Group 03 LocEn V0 I0 N ◊ CAEN SY1527

4:48 AM

Run sheet for experiment e06006			Run # 95	Date 7/4/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 820 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 750 KHz
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 75 Hz
Brhos 3.4897 Tm				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 1300 Hz
				<input type="checkbox"/> Empty frame	Coinc 8 Hz
Comments					

5:44 AM

Run sheet for experiment e06006			Run # 96	Date 7/4/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 1 MHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 940 KHz
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 85 Hz
Brhos 3.4897 Tm				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 1500 Hz
				<input type="checkbox"/> Empty frame	Coinc 10 Hz
Comments XFP Eff = 94.3% OBJ Eff = 94.1%					

Run sheet for experiment e06006				Run # 97	Date 7/4/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 895 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 818 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 79 Hz
Brhos 3.4897 Tm				<input type="checkbox"/> Empty frame	HiRA 1.52 kHz
Comments XFP: 0.935 OBJ: 0.928					

7:44 AM

Run sheet for experiment e06006				Run # 98	Date 7/4/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 920 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 845 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 75 Hz
Brhos 3.4897 Tm				<input type="checkbox"/> Empty frame	HiRA 1500 Hz
Comments XFP Eff = 93.2% OBJ Eff = 94.8%					

8:44 AM

Run sheet for experiment e06006				Run # 99	Date 7/4/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 1 MHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 950 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 88
Brhos 3.4897				<input type="checkbox"/> Empty frame	HiRA 1445
Comments					

9:47 AM

Run sheet for experiment e06006				Run # 100	Date 7/4/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 920 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 830 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 78
Brhos 3.4897				<input type="checkbox"/> Empty frame	HiRA 1426
Comments					

10:00 AM

Run sheet for experiment e06006			Run # 101	Date 7/14/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 900 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 850 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 60 Hz
Brho <sub>8</sub> 3.666				<input type="checkbox"/> Empty frame	HiRA 3300 Hz
Comments					

10:59 AM

Run sheet for experiment e06006			Run # 102	Date 7/14/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800
Brho <sub>8</sub> 3.666 T-m				<input type="checkbox"/> Empty frame	HiRA
Comments The scalers were fine. I just forgot to log them					

12:02 AM

Run sheet for experiment e06006			Run # 103	Date 7/14/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 900 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 850 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 62 Hz
Brho <sub>8</sub> 3.666				<input type="checkbox"/> Empty frame	HiRA 3250 Hz
Comments					

2:35 PM

Run sheet for experiment e06006			Run # 104	Date 7/14/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 940 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 860 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 74 Hz
Brho <sub>8</sub> 3.666					HiRA 450 Hz
Comments					

3:42 PM

Run sheet for experiment e06006			Run # 105	Date 7/4/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 895 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 840 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 68.5 Hz
Brhos 3.666				<input type="checkbox"/> Empty frame	HiRA 3370 Hz
Comments					Coinc 13.5

$$\begin{aligned} \text{XFP eff} &= \frac{718925}{767338} = 94\% \\ \text{OBJ eff} &= \frac{7099968}{767338} = 92.5\% \end{aligned}$$

CRDC Gas Flow GUI 4:20 PM

MFC flow #1 23.22 sccm  
 #2 8.0 sccm  
 #3 28.4 sccm

PT #1 300 Torr  
 #2 40 Torr

Telescope P3 (Tom 0 card 3) TRIPPED.  
 Biasing after stopping Run 105.

Run sheet for experiment e06006			Run # 106	Date 7/4/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 930 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 860 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 57
Brhos 3.666				<input type="checkbox"/> Empty frame	HiRA 330 Hz
Comments P3 bias tripped before BS in for ~1 min @ start					Coinc 12

Run sheet for experiment e06006				Run # 107	Date 7/4/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 830 h
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 770 h
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	S800 64
Brhos 3.6666				<input type="checkbox"/> Empty frame	HiRA 3.3k
Comments XFP eff = 93%		OBJ eff = 92%			

Air Conditioner died in Data 08 Control Room

Beam disappeared for last 2 minutes of Run 107.

A/C problem is raising humidity in lab and causing problems w/ cyclotrons. Stability is not great.

Run sheet for experiment e06006				Run # 108	Date 7/4/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 800 h
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 735 h
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	S800 56
Brhos 3.6666				<input type="checkbox"/> Empty frame	HiRA 3k
Comments P3 tripped for last few minutes.		Coinc 10			

Noticed P3 telescope tripped again

~ 6:50 pm Telescope P3 tripped  
again.

Started to bias  $\rightarrow$  no leakage current.  
Brought back down.

Leakage current for P3 is fluctuating bet<sup>n</sup> 0.9  $\mu$ A and 1.1  $\mu$ A.

Run 109 ended prematurely due  
to K500 problem. 7:20 PM.

Water alarm at 9:15 pm. checked vault. source seems  
to be the high humidity ~~be~~ as ACs were not working.

Got beam back at 9:55 pm.

Run sheet for experiment e06006				Run # 110	Date 7/4/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 900 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 820 KHz
<input checked="" type="checkbox"/> S800+HiRA			<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 66 Hz
Brhos 3.666				<input type="checkbox"/> CH <sub>2</sub> 100 $\mu$ m	HiRA 3000 Hz
				<input type="checkbox"/> Empty frame	Coinc 10
Comments					



Run sheet for experiment e06006				Run # 111	Date 7/4/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 875k
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 860k
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 66
Brhos 3.6660				<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 3.4k
				<input type="checkbox"/> Empty frame	Coinc 18

Comments

12:00 AM

Run sheet for experiment e06006				Run # 112	Date 7/13/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 630 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 530 kHz
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 45 Hz
Brhos 3.6660 T.m				<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 2500 Hz
				<input type="checkbox"/> Empty frame	Coinc 7 Hz

Comments

12:20 AM

Terminal							
Channel Name	V0Set	I0Set	VMon	IMon	Pw	Status	Ch#
Tow0Cart15	290.00 V	4.00 uA	290.25 V	0.56 uA	On		00.0000
Tow0Card12	440.00 V	4.00 uA	440.75 V	1.24 uA	On		00.0001
Tow0Card6	310.00 V	4.00 uA	310.25 V	0.68 uA	On		00.0003
Tow0Card3	395.00 V	6.00 uA	395.00 V	0.84 uA	On		00.0004
Tow1Card15	410.00 V	4.00 uA	410.00 V	1.96 uA	On		00.0005
Tow1Card12	310.00 V	5.00 uA	310.25 V	0.74 uA	On		00.0006
Tow1Card6	420.00 V	4.00 uA	420.00 V	1.64 uA	On		00.0008
Tow1Card3	240.00 V	5.00 uA	239.75 V	1.68 uA	On		00.0009
Tow2Card15	340.00 V	6.00 uA	340.25 V	3.14 uA	On		00.0010
Tow2Card12	300.00 V	6.00 uA	300.00 V	4.66 uA	On		00.0011
Tow2Card6	350.00 V	4.00 uA	349.75 V	1.24 uA	On		00.0013
Tow2Card3	265.00 V	4.00 uA	265.00 V	1.58 uA	On		00.0014
Tow3Card15	300.00 V	4.00 uA	299.75 V	1.34 uA	On		00.0015
Tow3Card12	220.00 V	4.00 uA	219.75 V	1.12 uA	On		00.0016
Tow3Card6	210.00 V	4.00 uA	209.75 V	1.12 uA	On		00.0018
Tow3Card3	450.00 V	4.00 uA	450.25 V	2.00 uA	On		00.0019
Tow4Card15	350.00 V	5.00 uA	5.25 V	0.00 uA	Off		00.0020
Tow4Card12	300.00 V	5.00 uA	300.00 V	1.92 uA	On		00.0021
Tow4Card6	220.00 V	5.00 uA	219.50 V	1.58 uA	On		00.0023
Tow4Card3	310.00 V	5.00 uA	309.75 V	0.96 uA	On		00.0024
CsI1	80.00 V	3.0 uA	80.10 V	0.0 uA	On		03.0005
CsI2	80.00 V	3.0 uA	80.00 V	0.4 uA	On		03.0011
CsI3	80.00 V	3.0 uA	79.60 V	0.2 uA	On		05.0005
CsI4	30.00 V	10.0 uA	80.05 V	0.2 uA	On		05.0011

Display/Edit Group 03      LocEn V0 I0      N | CAEN SY1527

We noticed the rate on the XFP scintillator had dropped below 500 kHz so we asked the operators to work on the beam while

1:00 AM

Run sheet for experiment e06006			Run # 113	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 850 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 800 KHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 65 Hz
Brhos 3.666 Tm				<input type="checkbox"/> Empty frame	HiRA 3000 Hz
					Coinc 11 Hz

Comments

2:00 AM

Run sheet for experiment e06006			Run # 114	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 860 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 800 KHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 60 Hz
Brhos 3.666 Tm				<input type="checkbox"/> Empty frame	HiRA 3200 Hz
					Coinc 12 Hz

Comments

The leakage current for Low O Card 3 seems to be holding steady at ~0.84 μA.

3:00 AM

Run sheet for experiment e06006			Run # 115	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 570 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 500 KHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 42 Hz
Brhos 3.666 Tm				<input type="checkbox"/> Empty frame	HiRA 2200 Hz
					Coinc 12 Hz

Comments

Again the beam operators gave a small tune to restore the rate on the XFP.

The scalars were frozen at the start of run 116.  
The daq crashed but after simply  
restarting the daq and scalars everything  
was running properly.

4:05 AM

Run sheet for experiment e06006			Run # 116	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 800 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 720 KHz
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 55 Hz
Brhos 3.666 T.m				<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 2900 Hz
				<input type="checkbox"/> Empty frame	Coinc 10 Hz

Comments

No increase in leakage currents as  
of 4:45 AM.

5:07 AM

Run sheet for experiment e06006			Run # 117	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 730 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 680 KHz
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 53 Hz
Brhos 3.666 T.m				<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 2700 Hz
				<input type="checkbox"/> Empty frame	Coinc 12 Hz

Comments

The beam rate seems to be dropping  
from  $\sim 900$  KHz (XFP) to  $\sim 600$  KHz (XFP)  
in 2 hours. The operators are aware that  
we want the rate above 500 KHz, preferably  
1 MHz, but it may be necessary to communicate  
this directly to them. So far they  
have been prompt about keeping the  
rate adequate. They have just adjusted  
the intensity; now the XFP rate is  $\sim 950$  KHz.

DW: No S800 controls diagnostics as the Mac is dead. This must  
have happened before midnight as Brett (who came 12 AM)  
got the thing in this condition, who special notice because  
from 8-12 shift. I let Daniel SVPD send fax to find another

## SCALER ALARM:

current/other/scaler/e06006.tbl  
code for "lowbeam"

6:09 AM

Run sheet for experiment e06006				Run # 118	Date 7/5/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 850 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 800 KHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 60 Hz
Brhos 3.666 Tm				<input type="checkbox"/> Empty frame	HiRA 3300 Hz
Comments					

XFP/OBJ still ~ 93% efficient  
7:11 AM

Run sheet for experiment e06006				Run # 119	Date 7/5/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 850 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 800 KHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 65 Hz
Brhos 3.666 Tm				<input type="checkbox"/> Empty frame	HiRA 2900 KHz
Comments					

Asked the operators for increased beam rate at start of run.  
XFP Eff = 92.6%      OBJ Eff = 92.6%

8:11 AM

Run sheet for experiment e06006				Run # 120	Date 7/5/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 840 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 750 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 58 Hz
Brhos 3.666 Tm				<input type="checkbox"/> Empty frame	HiRA 2900 Hz
Comments					

9:30

a) We found the ON-switch of the KMC

b) We got NMR, Spectel running

Spectel needs to be run from a terminal

(Documents/Projects/S800spectel/TradingPPAC  
- / S800spectel)

9:20

DANIEL IS IN NOW AND CONFIRMED NMR IS BACK IN ACTION. THIS HAS  
BEEN THE CASE SINCE AT LEAST MIDNIGHT (> 9 hrs)

Run sheet for experiment e06006			Run # 121	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 865 k
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 820 k
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	S800 60
Brhos 3-6660 Tm				<input type="checkbox"/> CH <sub>2</sub> 100 μm	HiRA 3200
				<input type="checkbox"/> Empty frame	Coinc 16
Comments					

9:20 AM

Tow0Card15	290.00 V	4.00 uA	290.25 V	0.54 uA On	00.0000
Tow0Card12	440.00 V	4.00 uA	440.75 V	1.24 uA On	00.0001
Tow0Card6	310.00 V	4.00 uA	310.25 V	0.68 uA On	00.0003
Tow0Card3	395.00 V	6.00 uA	395.00 V	0.84 uA On	00.0004
Tow1Card15	410.00 V	4.00 uA	410.00 V	1.98 uA On	00.0005
Tow1Card12	310.00 V	5.00 uA	310.25 V	0.74 uA On	00.0006
Tow1Card6	420.00 V	4.00 uA	420.00 V	1.64 uA On	00.0008
Tow1Card3	240.00 V	5.00 uA	239.75 V	1.68 uA On	00.0009
Tow2Card15	340.00 V	6.00 uA	340.25 V	0.14 uA On	00.0010
Tow2Card12	300.00 V	6.00 uA	300.00 V	1.70 uA On	00.0011
Tow2Card6	350.00 V	4.00 uA	349.75 V	1.24 uA On	00.0013
Tow2Card3	265.00 V	4.00 uA	265.00 V	1.58 uA On	00.0014
Tow3Card15	300.00 V	4.00 uA	299.75 V	1.36 uA On	00.0015
Tow3Card12	220.00 V	4.00 uA	219.75 V	1.12 uA On	00.0016
Tow3Card6	210.00 V	4.00 uA	209.75 V	1.12 uA On	00.0018
Tow3Card3	450.00 V	4.00 uA	450.25 V	2.04 uA On	00.0019
Tow4Card15	350.00 V	5.00 uA	5.50 V	0.00 uA Off	00.0020
Tow4Card12	300.00 V	5.00 uA	300.00 V	1.90 uA On	00.0021
Tow4Card6	220.00 V	5.00 uA	219.50 V	1.58 uA On	00.0023
Tow4Card3	310.00 V	5.00 uA	309.75 V	0.96 uA On	00.0024
CsI1	80.00 V	3.0 uA	80.10 V	0.0 uA On	03.0005
CsI2	00.00 V				



Run sheet for experiment e06006			Run # 122	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 412 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ <del>320</del> 350 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 70
Brhos 3.66660 Tm				<input type="checkbox"/> Empty frame	HiRA 1600
					Coinc 6
Comments Beamrate cut by half in first 5 minutes of run. Control Room is starting up beam for next experiment — should not interfere with ours — back to normal after another 5 minutes					

Run sheet for experiment e06006			Run # 123	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 890 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 790 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 55
Brhos 3.66660 Tm				<input type="checkbox"/> Empty frame	HiRA 2800
					Coinc 12
Comments					

Run sheet for experiment e06006			Run # 124	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>25</sup> Mg	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800
Brhos 3.6660 Tm				<input type="checkbox"/> Empty frame	HiRA
					Coinc
Comments					



July 5 2010

Run sheet for experiment e06006			Run # 125	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 820 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 770 K
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 48	
Brhos 3.666 TM			<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 2980	
			<input type="checkbox"/> Empty frame	Coinc 15	
Comments					

K1200 VACUUM FAILURE - ENDED RUN 125 AFTER 53 MINUTES.  
OPS TOOK KEY AND NO TIME FRAME GIVEN.

3:05 PM

Run sheet for experiment e06006			Run # 126	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 948 KHZ
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 748 KHZ
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 60	
Brhos			<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 3.4 KHZ	
			<input type="checkbox"/> Empty frame	Coinc 16	
Comments					

Run sheet for experiment e06006			Run # 127	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 945 K
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 886 K
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 75	
Brhos 3.6660			<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 3.5 K	
			<input type="checkbox"/> Empty frame	Coinc 15	
Comments					

Run sheet for experiment e06006				Run # 128	Date 7/5/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p <input checked="" type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup> <input type="checkbox"/> CH <sub>2</sub> 100 μm <input type="checkbox"/> Empty frame	XFP 923k
<input type="checkbox"/> HiRA singles					OBJ 870k
<input checked="" type="checkbox"/> S800+HiRA					S800 63.0
Brhos 3.6660					HiRA 3.5k
Comments					

XFP & OBJ efficiencies ~93% each.

Run sheet for experiment e06006				Run # 129	Date 7/5/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p <input checked="" type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup> <input type="checkbox"/> CH <sub>2</sub> 100 μm <input type="checkbox"/> Empty frame	XFP 930k
<input type="checkbox"/> HiRA singles					OBJ 866k
<input checked="" type="checkbox"/> S800+HiRA					S800 76
Brhos 3.6660					HiRA 3.5k
Comments					

Run sheet for experiment e06006				Run # 130	Date 7/5/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p <input checked="" type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input checked="" type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup> <input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup> <input type="checkbox"/> CH <sub>2</sub> 100 μm <input type="checkbox"/> Empty frame	XFP 770k
<input type="checkbox"/> HiRA singles					OBJ 730k
<input checked="" type="checkbox"/> S800+HiRA					S800 57
Brhos 3.6660					HiRA 3.3k
Comments					

R500 BREAKDOWN

Run sheet for experiment e06006				Run # 131	Date 7/5/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p <input checked="" type="checkbox"/> 2p <input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup> <input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup> <input type="checkbox"/> CH <sub>2</sub> 100 μm <input type="checkbox"/> Empty frame	XFP 854k
<input type="checkbox"/> HiRA singles					OBJ 923k
<input checked="" type="checkbox"/> S800+HiRA					S800 64
Brhos 3.6660					HiRA 3.3k
Comments					

8:00 P.M.

July 5, 2010

DAQ crashed. Rebooted (soft) Spdaq 20

&amp; loaded motherboard setup files

(e06006 - justly-1-setup) and

and (SI (shape file &amp; disc file).

Not sure gopico & goASIC\_E

were actively running before.

Run sheet for experiment e06006			Run # 132	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 980 h
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input checked="" type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 820 h
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 70
Brhos 3.6660				<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 3700
				<input type="checkbox"/> Empty frame	Coinc 12
Comments					

Run sheet for experiment e06006			Run # 133	Date 7/5/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input checked="" type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 890 k
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input type="checkbox"/> 2p	<input type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 946 k
<input checked="" type="checkbox"/> S800+HiRA	1		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	S800 83
Brhos 3.6660				<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	HiRA 3.5k
				<input type="checkbox"/> Empty frame	Coinc 10
Comments					

Switching to  $^{28}\text{Mg}$ -1p again, but this time

00PM. Trying dispersion matched mode

Al900  $\Delta p$  closed to 0.5%

Run sheet for experiment e06006			Run # 134	Date 7/15/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input type="checkbox"/> 1p	<input type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 1700
<input checked="" type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 1600
<input type="checkbox"/> S800+HiRA		<input checked="" type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	S800 550
Brho <sub>s</sub> 3.3408				<input type="checkbox"/> Empty frame	HiRA 500
					Coinc 0

Comments Switched to Disp. Matched Mode and optimized resolution.

ATT 1000 T

12:26 AM

Run sheet for experiment e06006			Run # 135	Date 7/16/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 880 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 800 KHz
<input type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	S800 85 Hz
Brho <sub>s</sub> 3.4897 Tm				<input type="checkbox"/> Empty frame	HiRA 2600 Hz
					Coinc 9 Hz

Comments

Run sheet for experiment e06006			Run #	Date 7/16/2010	
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> $^{28}\text{Mg}$	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> $^9\text{Be}$ 100 mg/cm <sup>2</sup>	XFP 872 kHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> $^1\text{H}$	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> $^9\text{Be}$ 9 mg/cm <sup>2</sup>	OBJ 806 kHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> $^{197}\text{Au}$ 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 $\mu\text{m}$	S800 85 Hz
Brho <sub>s</sub> 3.4897 Tm				<input type="checkbox"/> Empty frame	HiRA 2.6 kHz
					Coinc 7 Hz

Comments OBJ 0.936 XFP 0.935

We are not able to "attach online" to view the HiRA PID spectra. We have tried restarting the Spectcl and opening from different terminals to no avail. We are able to "attach to file" so we can still monitor the runs at their conclusion. The error we get when trying to attach online is,

Failed to add unreliable sink

2:24 AM

Run sheet for experiment e06006				Run # 137	Date 7/6/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 860 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 800 KHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 80 Hz
Brhos 3.4897 Tm				<input type="checkbox"/> Empty frame	HiRA 2700 Hz
					Coinc 8.0 Hz

Comments XFP EFF = 93.5% OBJ EFF = 93.6%

In an effort to regain our "online" analysis we rebooted VGP2. worked!

Run sheet for experiment e06006				Run # 138	Date 7/6/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 816 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 780 KHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 59 Hz
Brhos 3.4897 Tm				<input type="checkbox"/> Empty frame	HiRA 25 KHz
					Coinc 7 Hz

Comments OBJ 0.936 XFP 0.931

3:35 AM

Run sheet for experiment e06006				Run # 139	Date 7/6/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 850 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 800 KHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 80 Hz
Brhos 3.4897 Tm				<input type="checkbox"/> Empty frame	HiRA 2400 Hz
					Coinc 6 Hz

Comments Quick beam tune restored rate.

5:35 AM

Run sheet for experiment e06006				Run # 140	Date 7/6/2010
Trigger	DS	Beam	Reaction	Target	Scaler rates
<input checked="" type="checkbox"/> S800 singles	1	<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input checked="" type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be 100 mg/cm <sup>2</sup>	XFP 860 KHz
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> <sup>9</sup> Be 9 mg/cm <sup>2</sup>	OBJ 820 KHz
<input checked="" type="checkbox"/> S800+HiRA		<input type="checkbox"/> Unreacted	<input type="checkbox"/> <sup>197</sup> Au 20 mg/cm <sup>2</sup>	<input type="checkbox"/> CH <sub>2</sub> 100 μm	S800 83 Hz
Brhos 3.4897 Tm				<input type="checkbox"/> Empty frame	HiRA 2600 Hz
					Coinc 6 Hz

Run sheet for experiment e06006

Trigger	DS	Beam	Reaction	Target
<input checked="" type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be
<input checked="" type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> Unreacted
<input type="checkbox"/> S800+HiRA	1		<input checked="" type="checkbox"/> Unreacted	
Brhos 3.3408				
Comments Switched to Disp. Match 0%				

AST 1050

Run sheet for experiment e06006

Trigger	DS	Beam	Reaction	Target
<input type="checkbox"/> S800 singles		<input checked="" type="checkbox"/> <sup>28</sup> Mg	<input type="checkbox"/> 1p	<input type="checkbox"/> <sup>9</sup> Be
<input type="checkbox"/> HiRA singles		<input type="checkbox"/> <sup>1</sup> H	<input type="checkbox"/> 2p	<input checked="" type="checkbox"/> Unreacted
<input type="checkbox"/> S800+HiRA	1		<input checked="" type="checkbox"/> Unreacted	
Brhos 3.4897 T				
Comments				

Scaler rates  
 XRP 816 kHz  
 OBJ 780 kHz  
 S800 59 kHz  
 HiRA 2.5 kHz  
 2 Hz

OBJ EFF = 93.6%  
 OBJ 800 kHz  
 S800 800 kHz  
 HiRA 2700 kHz

OBJ EFF = 93.6%  
 OBJ 800 kHz  
 S800 800 kHz  
 HiRA 2700 kHz

Run # 137

Reaction  1p

Target  <sup>9</sup>Be 100 mg/cm<sup>2</sup>

<sup>9</sup>Be 9 mg/cm<sup>2</sup>

<sup>197</sup>Au 20 mg/cm<sup>2</sup>

CH<sub>2</sub> 100 μm

Empty frame

Date 7/16/2010

2:24 AM

7/16/2010

ates  
 10 KHz  
 KHz  
 KHz



