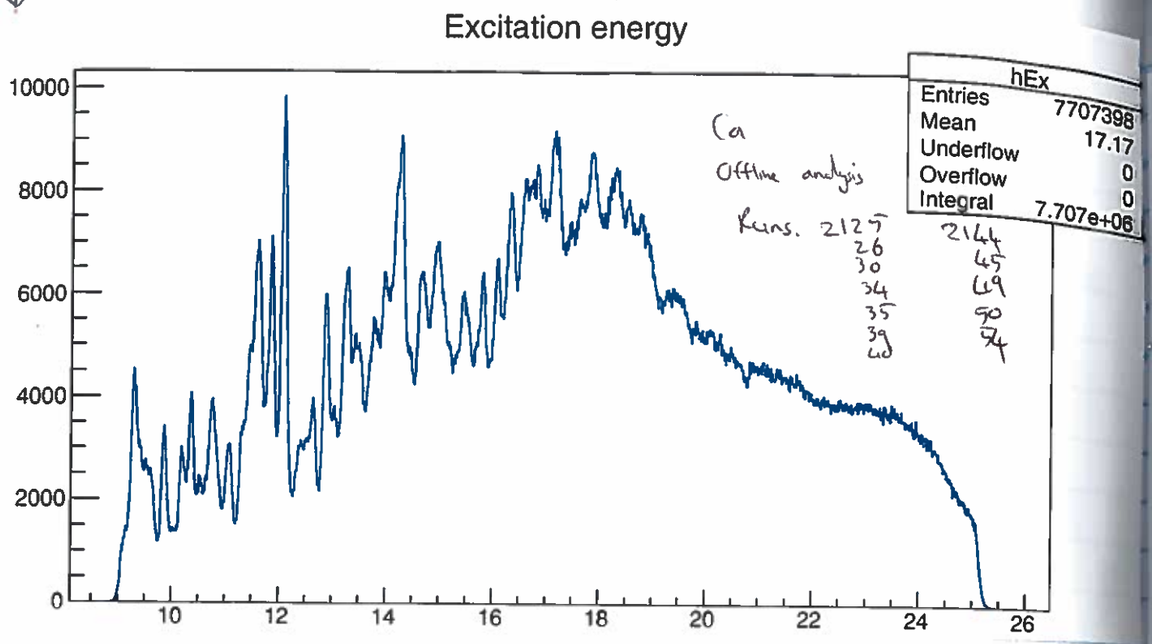
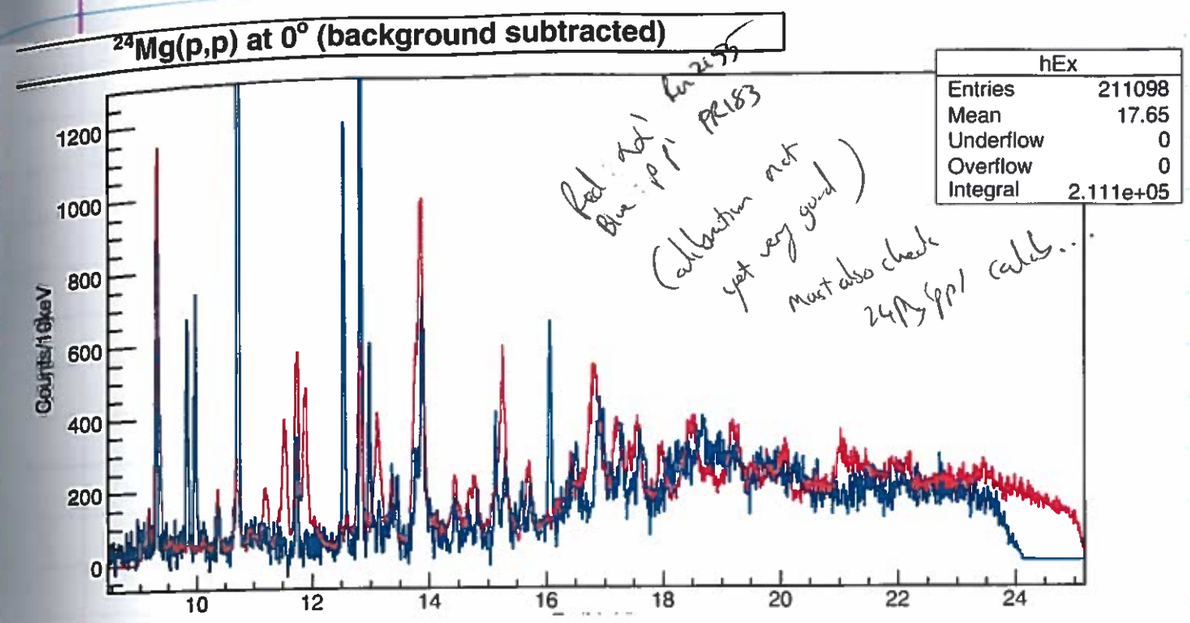
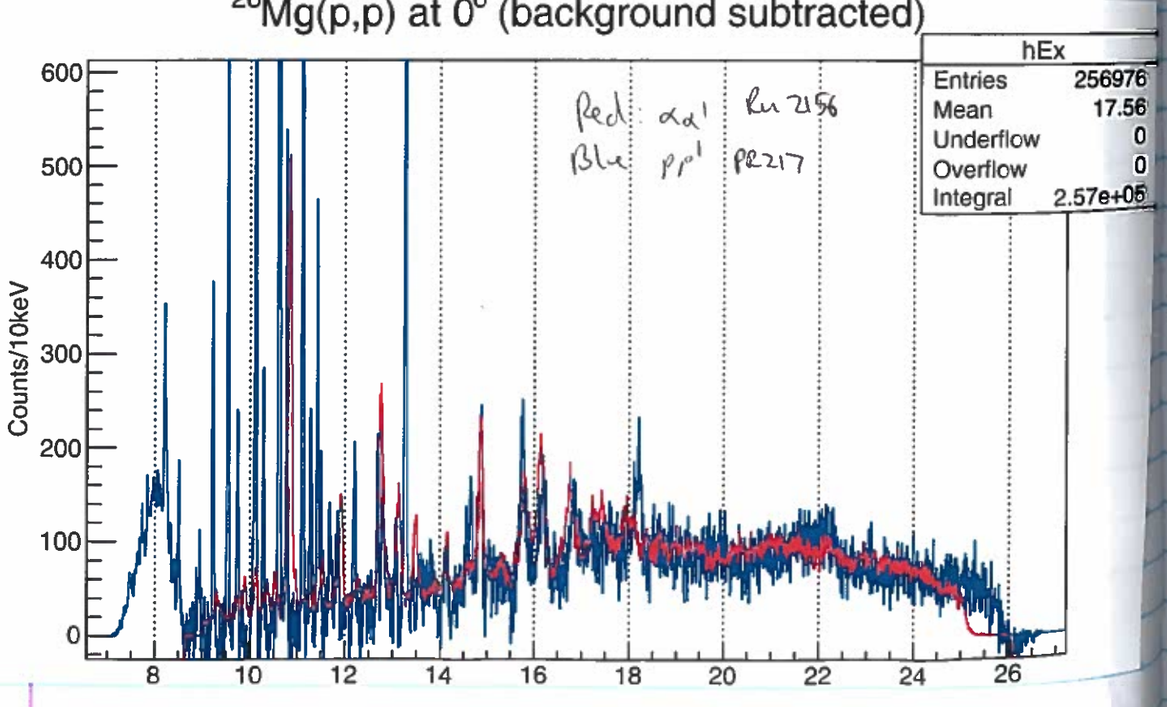
OFFLINE ANALYSIS of WEEKEND 2







Detector Setup	Order of detectors	Detectors	Sketch
↓	VDC 1	X	
		U	
	VDC 2	X	
		U	
	Paddle 1	1/4"	
	Paddle 2	1/8"	
Focal Plane (HD or MD)			HD
Kapton window (HD or MD)			HD without angle (p. 9)

Additional Notes:

Collimator Carousel	#	In perspex	In beam
	1	49 Φ 11 mm	NOTHING
	2	63 Φ	PEPPERPOT
	3	SOLID	49 Φ 11 mm
	4	42 Φ 8 mm Ta	63 Φ
	5	NOTHING	SOLID
	6	PEPPERPOT	42 Φ 8 mm Ta
		Configuration (not 0 deg/ =0 deg)	= 0 deg

Additional Notes:

Spectrometer Parameters	Angle	+ 0.05°	
	Magnets settings	Q	- 454.175
		D1	412.800
		~~H~~ D2	271.908
		~~D2~~ H	-2.833
		K	2.833
	Superknob settings	Dipole 1	412.800
		D1/D2	1.5232
		D1/Q	-0.9089
		D1/K	145.612
		D1/H	-145.6912
	SP Interlock control (Enable/ Disable)		Int. Enabled

Additional Notes:

Empty

viewer

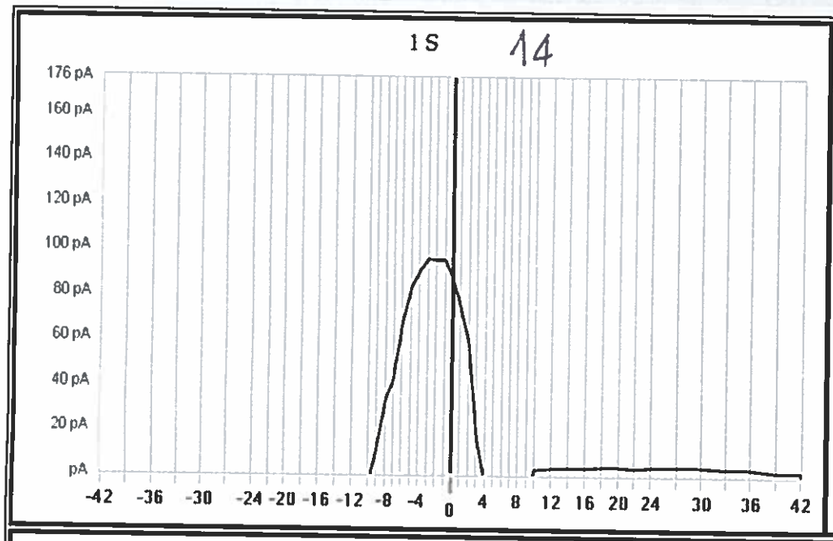
^{24}Mg

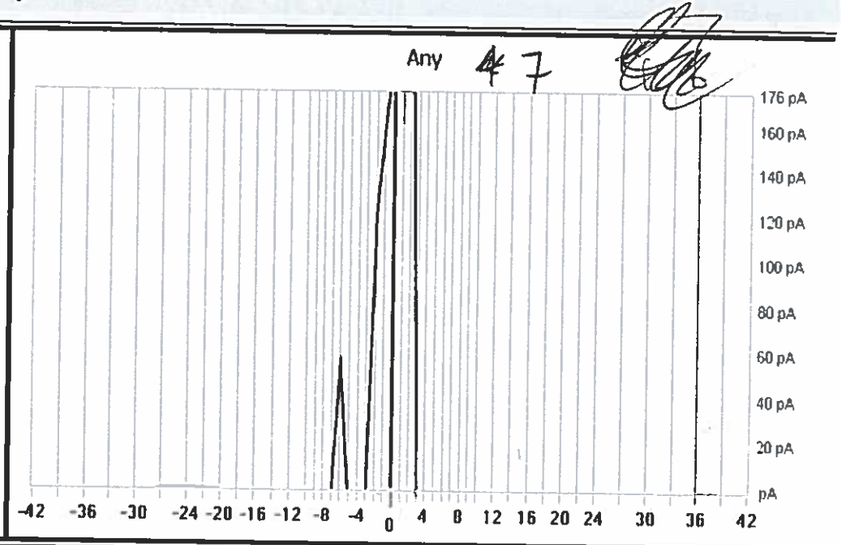
208Pb

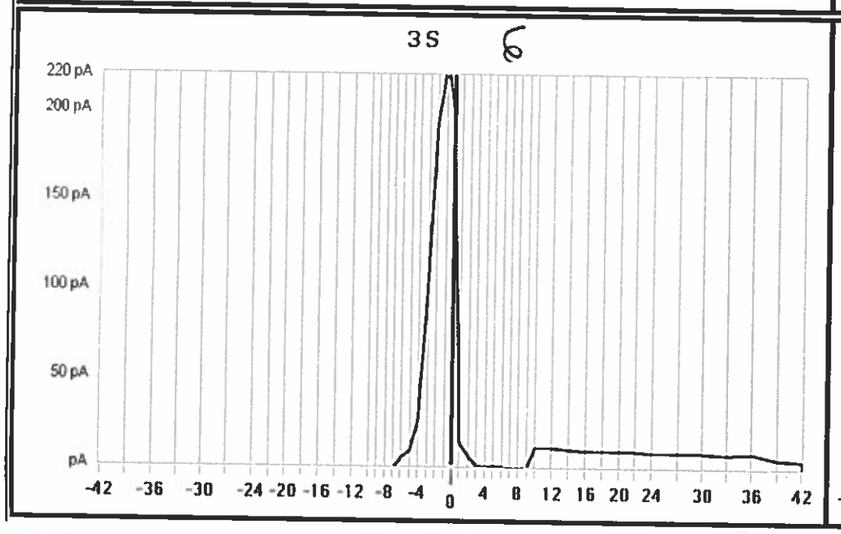
^{13}C

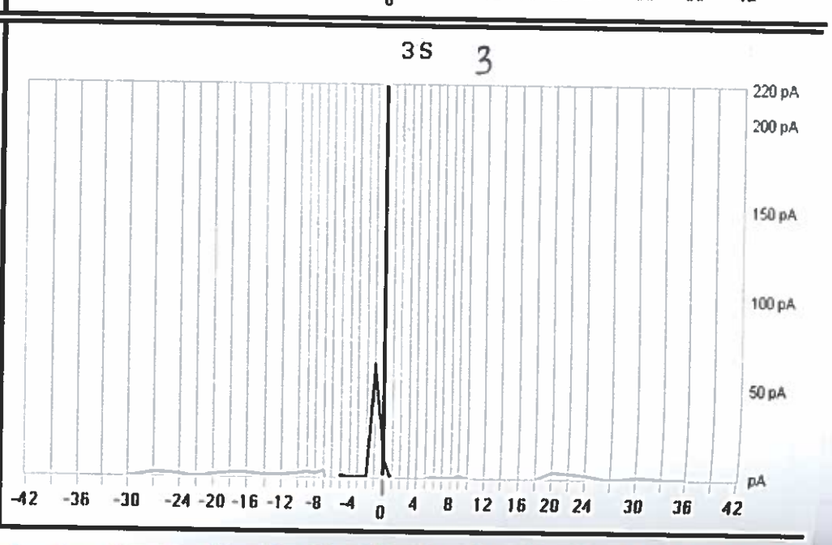
^{58}Ni

Profile Print : 03 April 2015 : 10:44:47

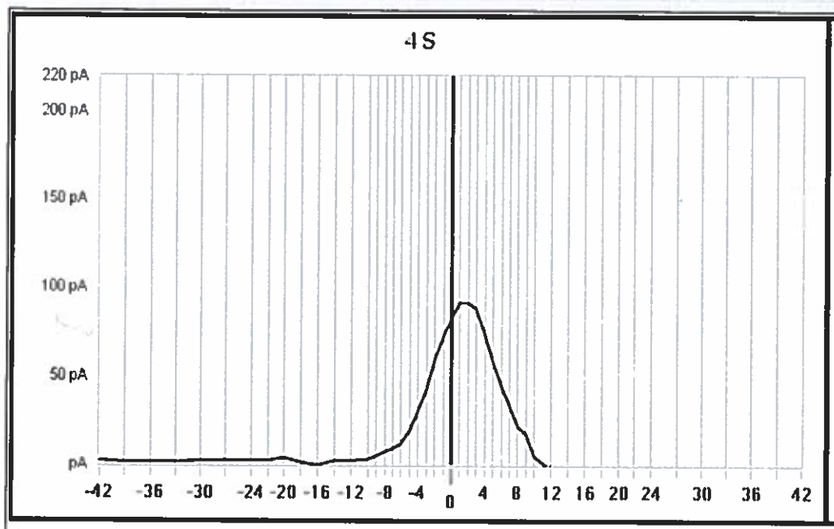


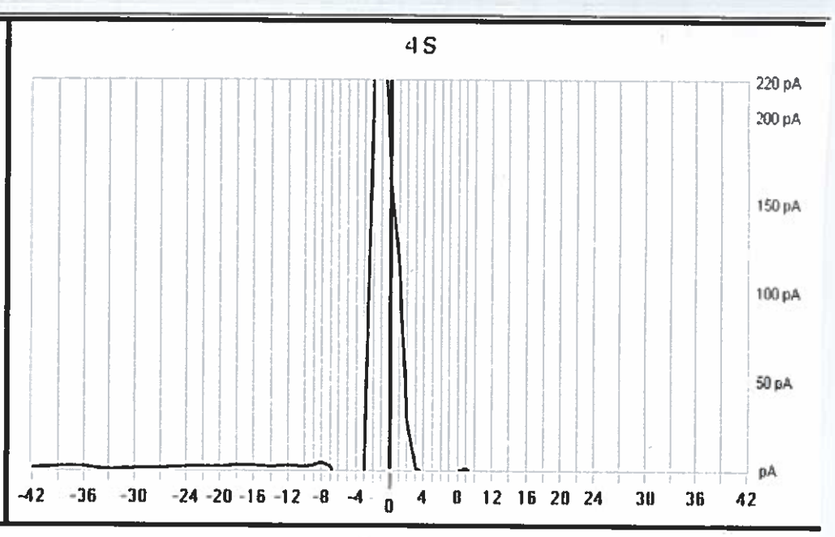






Profile Print : 03 April 2015 : 10:45:17





18

7

12:10 : Beam at beam dump
Current 0.8 nA
Background ~ 45

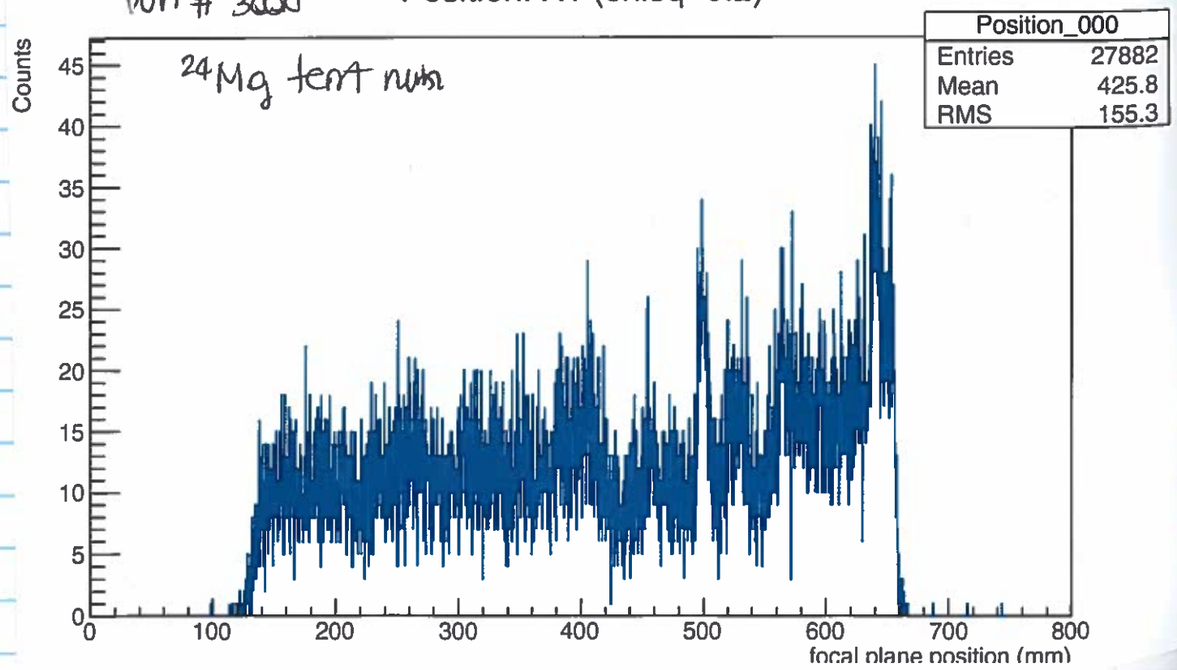
- Target of ^{24}Mg in and we turn on the detectors

VDC Voltage inside vault | -2.95 kV = VDC1
| -2.94 kV = VDC2

Set high tof gate to 4820 from 4910 to exclude background during run #3000

Run comment: ^{24}Mg test run
Run #: 3000
Start: 12:16 Current: 0.4 nA
Stop: 12:33 CI Range: 6
Target: ^{24}Mg #3 Collimator: #3
Target angle: -118°
K600 angle: 0 deg
K600 field:
Trigger rate: 32 Hz
Data rate: 13 kB/s
Trigger evts: 40343
Scaler evts: 952
Q: -454.175 A
D1: 412.800 A
H: -2.833 A
D2: 271.008 A
K: 2.833 A
VDC efficiency
X1 93.65
U1 93.85
X2 86.13
U2 94.45

run # 3000 Position: X1 (chisq<0.2)



12:40 → FAINT BEAM set D1 = 437.24

⇒ Q = -481.065
D1 = 437.24
D2 = 287.0654
H = -3.001
K = +3.001

Run comment: EMPTY faint beam
Run #: 3001
Start: 12:45 Current: Faint nA
Stop: 12:57 CI Range:
Target: EMPTY Collimator: #3
Target angle: -118°
K600 angle: 0 deg
K600 field:
Trigger rate: 700 Hz
Data rate: 303 kB/s
Trigger evts:
Scaler evts:
Q: -481.065 A
D1: 437.24 A
H: -3.001 A
D2: 287.054 A
K: 3.001 A
VDC efficiency
X1
U1
X2
U2

- Set low tof to 4690 and hi tof 4730 to select the events for the faint beam mode.

FWHM ↦ σ = 0.5049 mm ⇒ FWHM (MeV) = 39
Mean = 304.12

Now we try to improve the Energy resolution

Q6S = 34.9 at the moment. Try to change Q6

Run #3002	Q6S = 35.1	σ = 0.505 mm
Run #3003	Q6S = 34.7	σ = 0.548 mm
Run #3004	Q6S = 34.8	σ = 0.522 mm
Run #3005	Q6S = 35.0	σ = 0.501 mm
Run #3006	Q6S = 34.9	σ = 0.509 mm

Back to Q6S = 34.9 we try to change Q21P
now it is set at Q21P = 30.25

Run #3007	Q21P = 30.15	σ = 0.508 mm
Run #3008	Q21P = 30.05	σ = 0.516 mm

Run #3009 Q21 P = 30.35 σ = 0.509 mm

Run #3010 Q21 P = 30.55 σ = 0.508 mm

Run #3011 Q21 P = 30.75 σ = 0.519 mm

Run # 3012 Q21 P = 30.45 σ = 0.506 mm

Run # 3013 Q21 P = 30.45 → σ = 0.522 mm
phase changer

Run # 3014 Q21 P = 30.45 → σ = 0.484 mm
phase changer in the other direction

Run # 3015 Q21 P = same → σ = 0.475 mm
changes phase again

Run # 3016 Q21P = 30.25 σ = 0.480 mm

try again to change Q6S. Q21 P still at 30.25

Run # 3017 Q6S = 35.21 σ = 0.481 mm

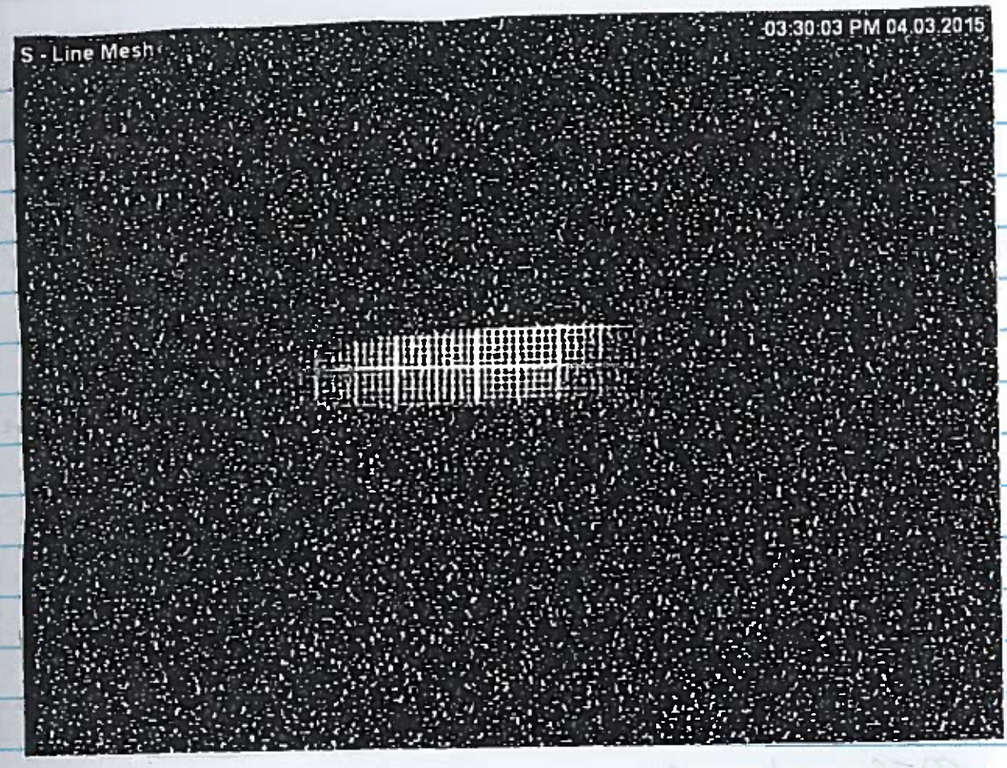
⇒ with σ = 0.48 mm the resolution is 37 keV since the resolution ~~seem~~ seems ~~is~~ not to change if we change the Q6S and Q21 P we look again at the beam and see it on target.

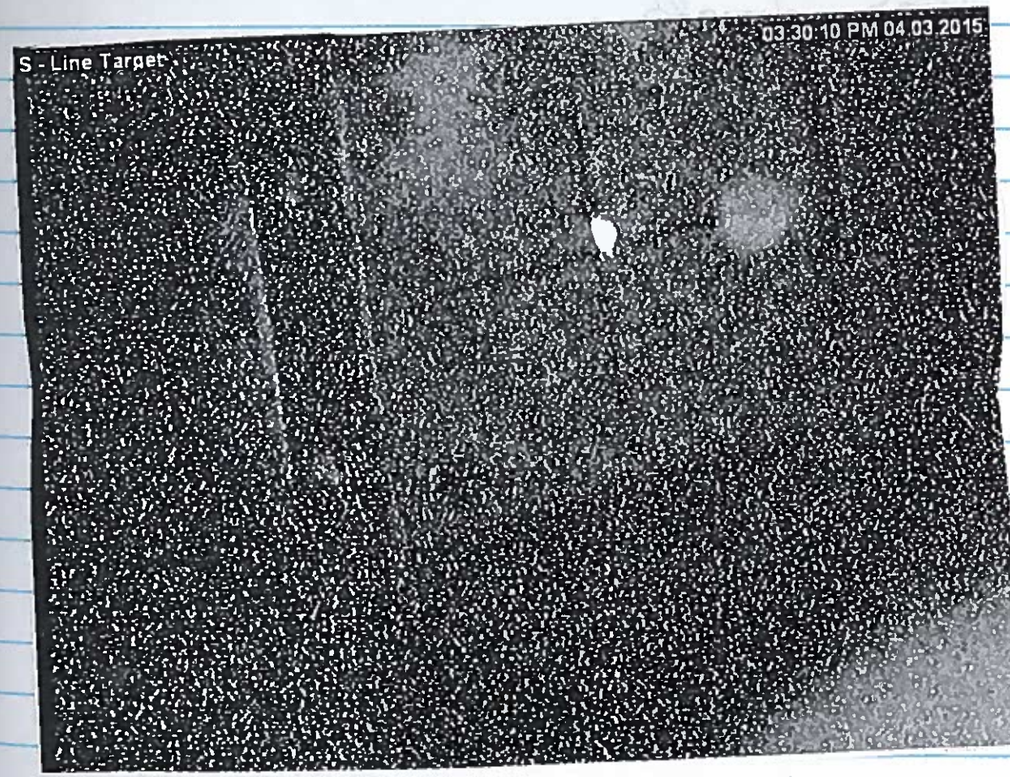
~~change field again ⇒ now change to Q12.86~~

⇒ Collimator now is ~~#~~ #5 (SOLID)
target: VIEWER

13:30 Hokanda looks wrong. Ops are going to check the P-line. 20 min or so
Time for lunch.

Problems with a field monitor stuck ∴
Beam back @ 15.40





Need to restart procedure →

Spec. transmission
Halo
Faint beam

Beam spot on beam-dump viewer is over on side of viewer + quite broad.

↓

Keep on edge → 208Pb GMR
goes quite low ~ Ex.

Q5S changes.

Q5S originally -56.1A Reference values
Q6S was +35.1A

Q5S now at -56.4A
Q6S now at +34.9A

Halo tune → 5 kHz @ ~.3 uA.

Currently ~80 Hz @ .7 uA.

Run 3019 Halo tuning run.
(+3018)
+3020

Going to try steering the beam away from the FP.

D1: 412-800 A.

(In the P-line. Steer Y 6. P-line. Changes slope. ⇒ Exercise on y-effect)

Superkab: D1 to 412.200 A
Q: -453.515 A
D1: 412.2 A
H: -2.829 A
D2: 270.614 A
V: 2.829 A

New Ldo is ~ 50-60 Hz @ 1 nA.

50 @ 1.1 nA.

Go to faint beam mode. with superkob

D1 = 437.24

Run 3022 Q5S = -56.4 Q18P = 24.3
Q6S = 36.9
Q21P = 30.250
-500 Hz σ = 0.6mm

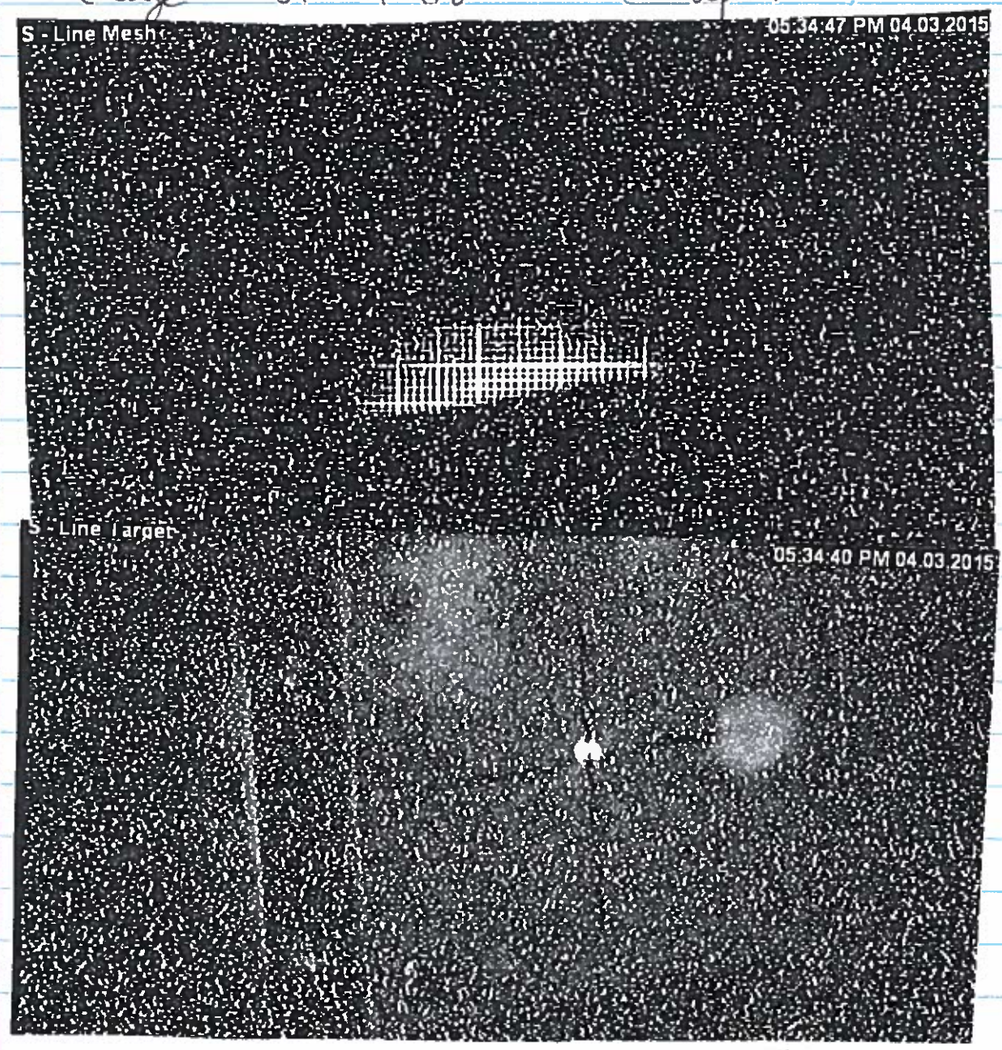
3023 Q6S = 35.1 σ = 0.52
3024 Q6S = 35.3 σ = 0.57
3025 Q6S = 35.5 σ = 0.69
3026 Q6S = 35.0 σ = 0.53
3027 Q6S = 35.1 σ = 0.55
Q21P = 30.45
3028 Q21P = 30.05 σ = 0.52
3029 " 29.85 σ = 0.51
3030 29.65 σ = 0.5
3031 29.45 σ = 0.5
3032 Q21P = 29.65
Q18P = 24.1 σ = 0.51
3033 Q18P 23.9 σ = 0.51
3034 24.3 σ = 0.52
3035 24.6 σ = 0.51
3036 24.2 σ = 0.52

3037 5x phase 10.5°
↓
10° 0.51

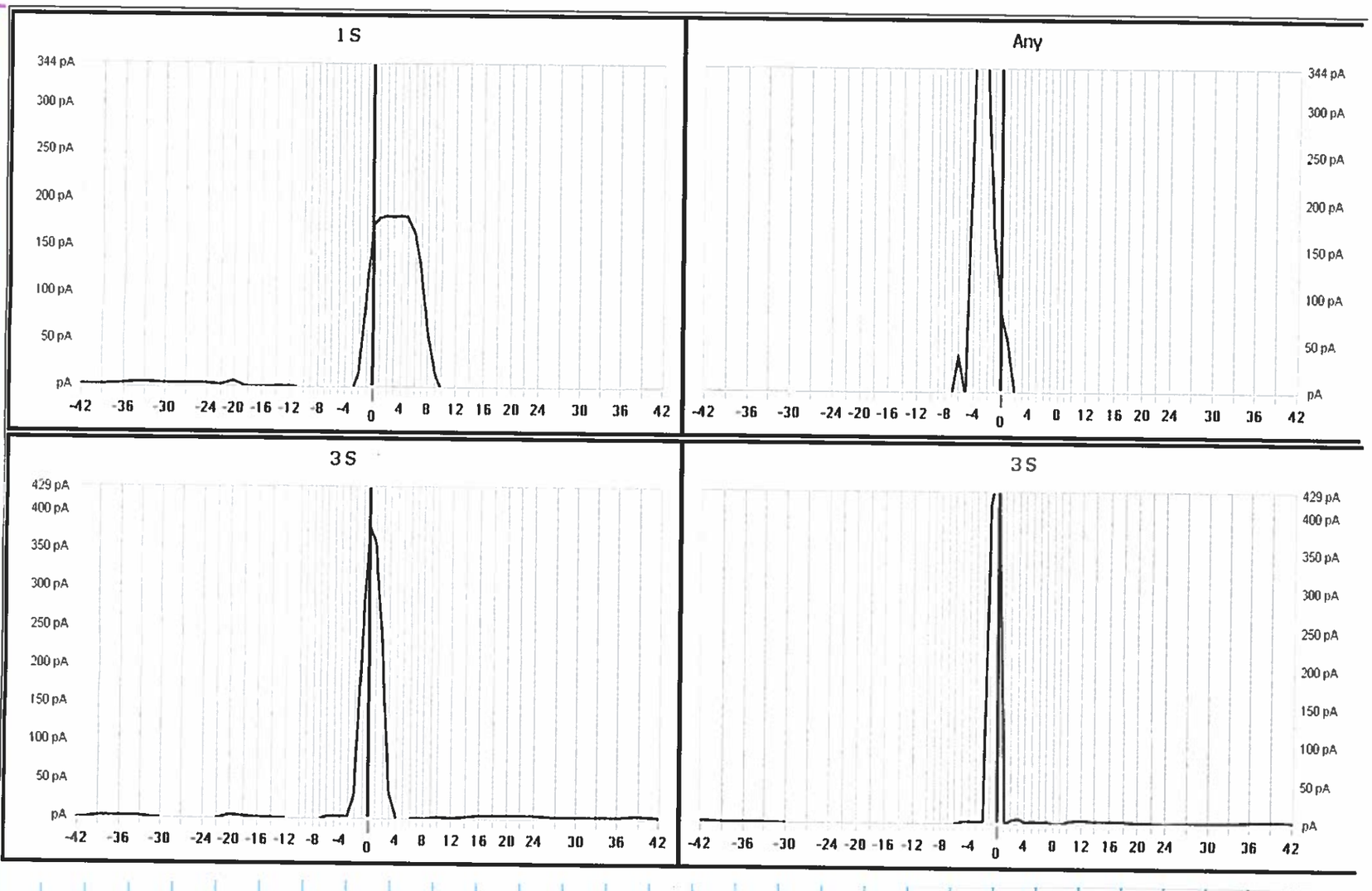
3038 5x phase 11° 0.49 → 0.5.

3039 11.5° 0.49 → 0.5

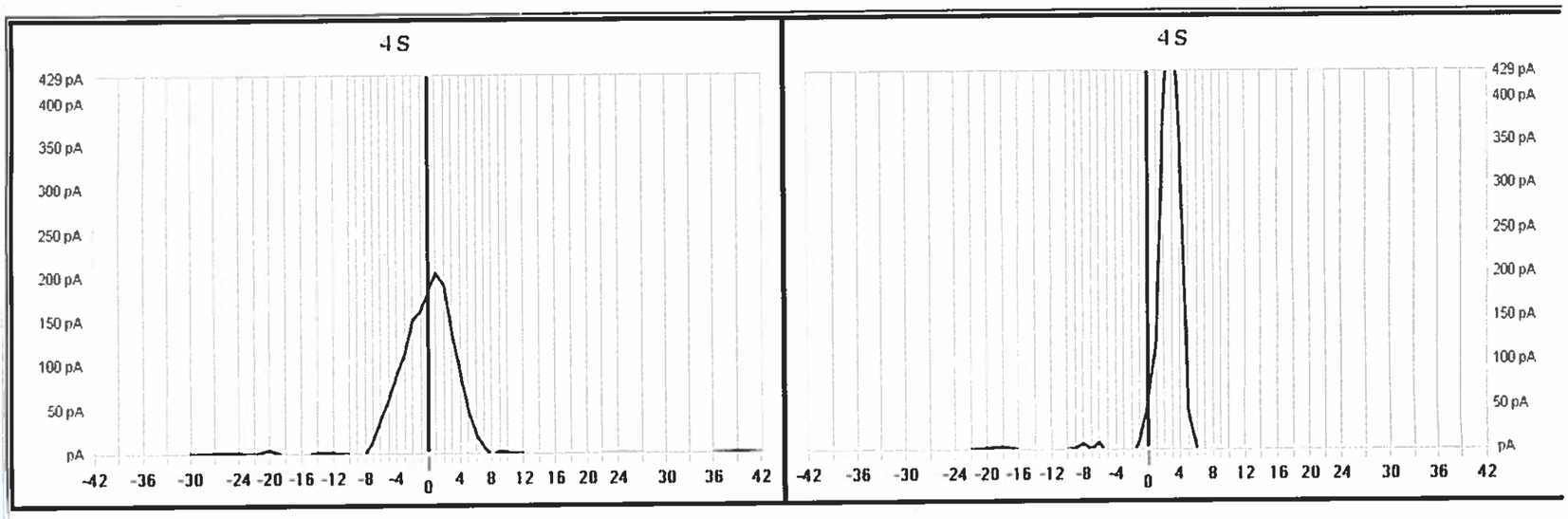
Operators to look at Beam in 5x Ink cannot get below σ = 0.5 mm with faint beam.
Change D1 = 412.8 with superkob



Profile Print : 03 April 2015 : 17:05:09



Profile Print : 03 April 2015 : 17:05:59



Halo run 3041

30 Hz @ 1.3 nA.

Go to <u>faint beam.</u>

D1 = 437.24

Run 342 Q6S 35.1 Q21P = 29.65

Q53 -56.4 σ = 0.55 mm

3043	Q6S = 35.3	σ = 0.48
3044	Q6S = 35.5	σ = 0.49
3045	= 35.7	σ = 0.54
3046	Q21P = 29.85 (Q6S = 35.3)	σ = 0.48
3047	= 30.05	σ = 0.48
3048	= 30.25	σ = 0.48
3049	= 29.45	σ = 0.47
3050 ~~3048~~	= 29.25	σ = 0.46
51 ~~3049~~	= 29.05	σ = 0.46
52 ~~3050~~	Q21P = 29.25	
	Q19P = 29.3 → 29.5	σ = 0.45
53 ~~3051~~	29.7	σ = 0.46
~~3052~~	Q15 = 17.9 → 18.1	σ = 0.45
~~3053~~	18.3	σ = 0.43
~~3054~~	18.5	σ = 0.46
~~3055~~ 7	18.3	σ = 0.44
~~3056~~ 8	Q35 = 45.4 → 45.6	σ = 0.46
~~3057~~ 9	45.2	σ = 0.46
~~3058~~ 60	Q35 = 45.4	σ = 0.45
~~3059~~ 61	Q45 = 29.5 → 29.7	σ = 0.48
3062	29.3	σ = 0.44
3063	Q45 = 29.5	

3064	Q6S = 35.5	σ = 0.49
3065	= 35.1	σ = 0.51
3066	"	= 0.50
3067	= 35.3	= 0.46
3068	Q19P = 29.7	= 0.47
3069	29.3	= 0.48
3070	29.5	= 0.45 mm

Peak pos = 336.32

FWHM : 35 keV

3071 Pb tgt with faint beam

Peak pos = 335.91 mm

σ = 0.637 mm

3072 Ni tgt with faint beam

Peak pos = 335.72 mm

σ = 0.565 mm

3073 ^{24}Mg with faint beam

Peak pos = 335.97

σ = 0.711 mm

3074 ^{13}C with faint beam

Peak pos = 336.21

σ = 0.487 mm

3075 empty, faint beam

Peak pos = 336.30

σ = 0.46 mm

Back to ~~beam~~ field PI = 412.8
Normal settings, done with faint beam.

Had to change DI to 413.8 to get this on the beamdump viewer:

Energie_NMR.txt

```
** EnMet Ver5.7 Oct 2013 **

** BEREKENDE ENERGIE **** CALCULATED ENERGY **        2015/04/03

Versnelde deeltjie       Accelerated particle :
  Element                                = He
  Atoomgetal          = Atomic Number    = 2
  Massagetal          = Mass Number      = 4
  Rel. Atoommassa     = Rel. Atomic Mass = 4.0026
  Natuurlike voorkoms = Natural Abundance = 100 %
  Ladingsgetal Q      = Charge State Q   = 2

              1 Tesla = 42.5759 MHz    [Linear Relation]

-------------------------------------------------------------

BEAM ENERGY FROM NMR-READING/S (frequency) :

-------------------------------------------------------------

BEAM ENERGY FROM NMR-READING/S (field):

  B3P Beam Energy = 196.49 MeV from NMR = 1.022504 Tesla

-------------------------------------------------------------
```


Run 3076 Halo run
End with ~ 70Hz @ 2.4nA.

Run comment: Calibration Run
Run #: 3077
Start: 19:04
Stop: 19:34
Target: 24Mg
Target angle: -118
Current: 3.5 nA
CI Range: 6
Collimator: #3 (4-9-11)
Trigger rate: 156 Hz
Data rate: kB/s
Trigger evts: 307370
Scaler evts: 1792
K600 angle: 0 deg
K600 field:
Q: -455.276 A
D1: 413.8 A
H: -2.840 A
D2: 271.665 A
K: 2.840 A
VDC efficiency
X1 93
U1 96
X2 87
U2 94

Run comment: 13C
Run #: 3078
Start: 19:37
Stop: 20-15
Target: 13C
Target angle: -118
Current: 2.2 nA
CI Range: 6
Collimator: #3
Trigger rate: 155 Hz
Data rate: 61 kB/s
Trigger evts: 353976
Scaler evts: 2174
K600 angle: 0 deg
K600 field:
Q: S A
D1: S A
H: A A
D2: a A
K: E A
VDC efficiency
X1 93
U1 94
X2 88
U2 94

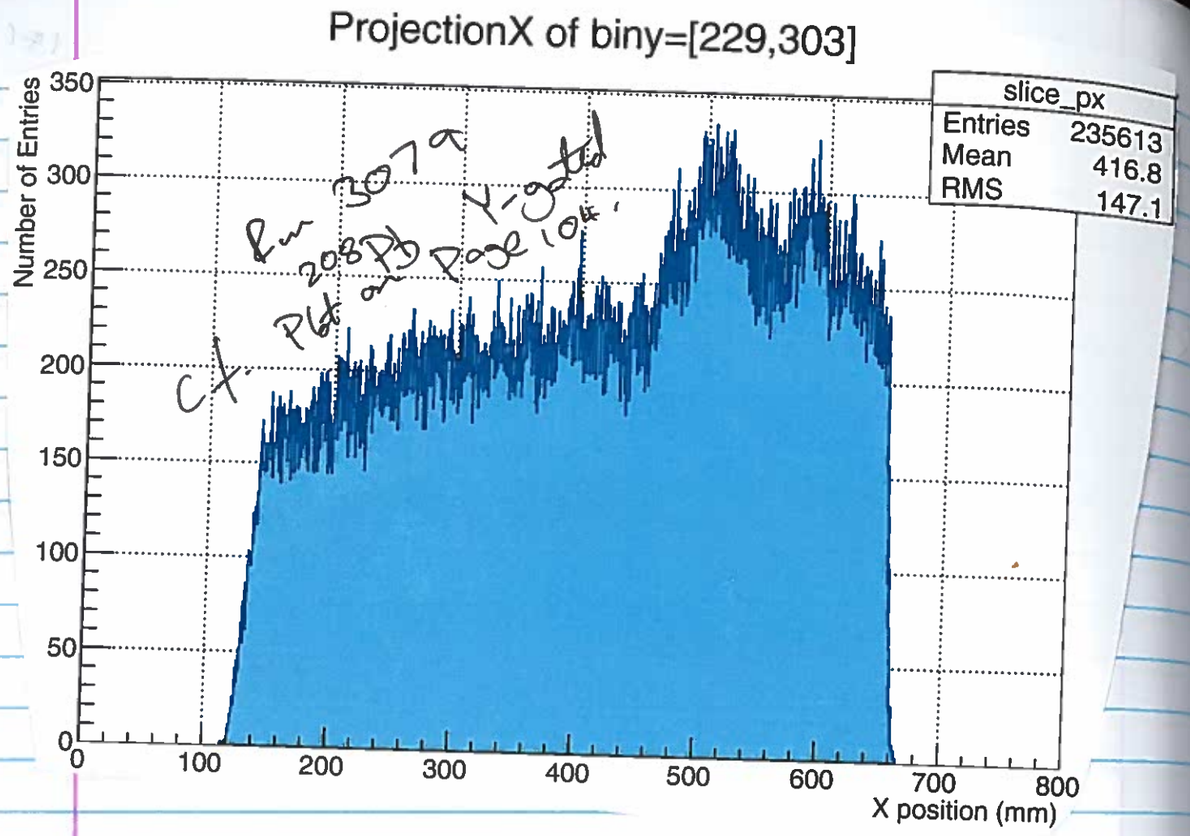
Run comment: 208Pb
Run #: 3079
Start: 20:16
Stop: 20:52
Target: 208Pb
Target angle: -118
Current: 2.2 nA
CI Range: 6nA
Collimator: #3
Trigger rate: 700 Hz
Data rate: 300 kB/s
Trigger evts:
Scaler evts:
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: E A
K: A
VDC efficiency
X1
U1
X2
U2

(See page 104 for the 208Pb spectra of Youngblood et al.).

VDC 2 tripped @ 20.51

Run comment: 208Pb
Run #: 3080
Start: 20:53
Stop: 21:55
Target: 208Pb
Target angle: -116
Current: 21 nA
CI Range: 6nA
Collimator: #3
Trigger rate: 640 Hz
Data rate: 271 kB/s
Trigger evts: 26184
Scaler evts: 3601
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: A
D2: M A
K: E A
VDC efficiency
X1 91
U1 95
X2 83
U2 95

Run comment: 24Mg
Run #: 3081
Start: 21:57
Stop: 22:27
Target: 24Mg
Target angle: -118
Current: 2,8 nA
CI Range: 6nA
Collimator: #3
Trigger rate: 256 Hz
Data rate: 112 kB/s
Trigger evts: 440605
Scaler evts: 1705
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: E A
K: A
VDC efficiency
X1 92
U1 94
X2 86
U2 94



Stop run 3081 since it is clear we have halo problem

Run 3082. Halo tuning

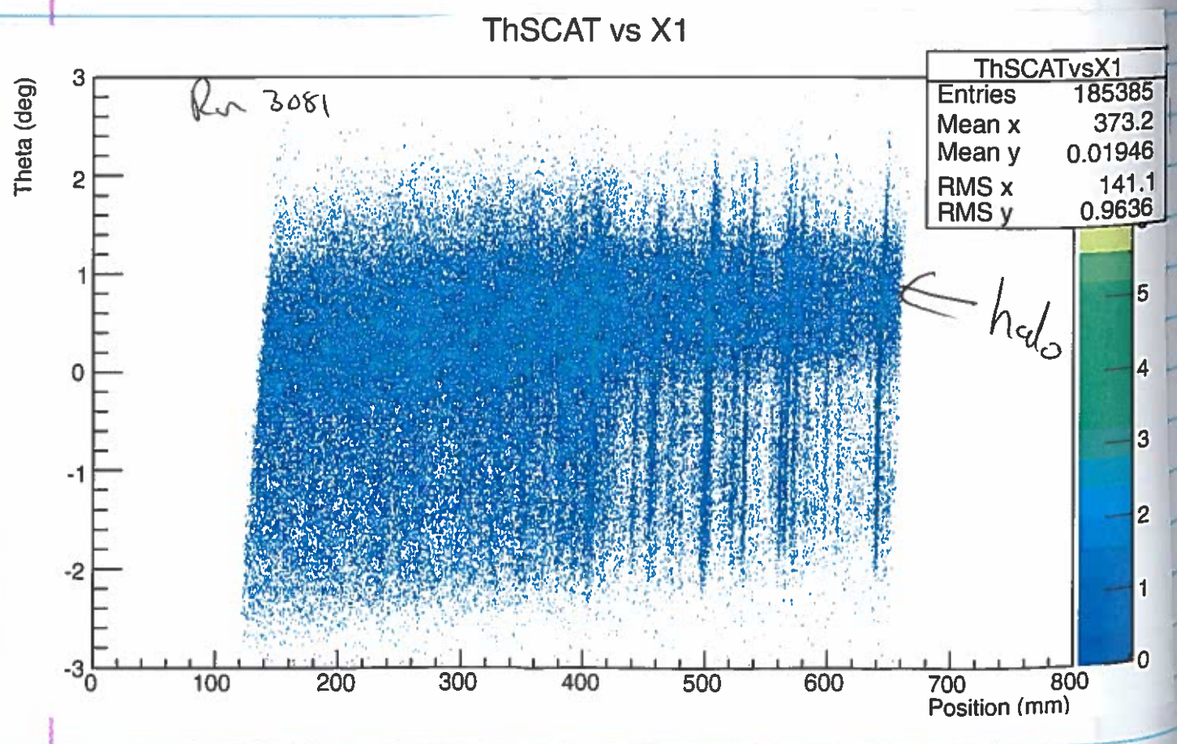
Start at ~80 Hz @ 2.6 nA

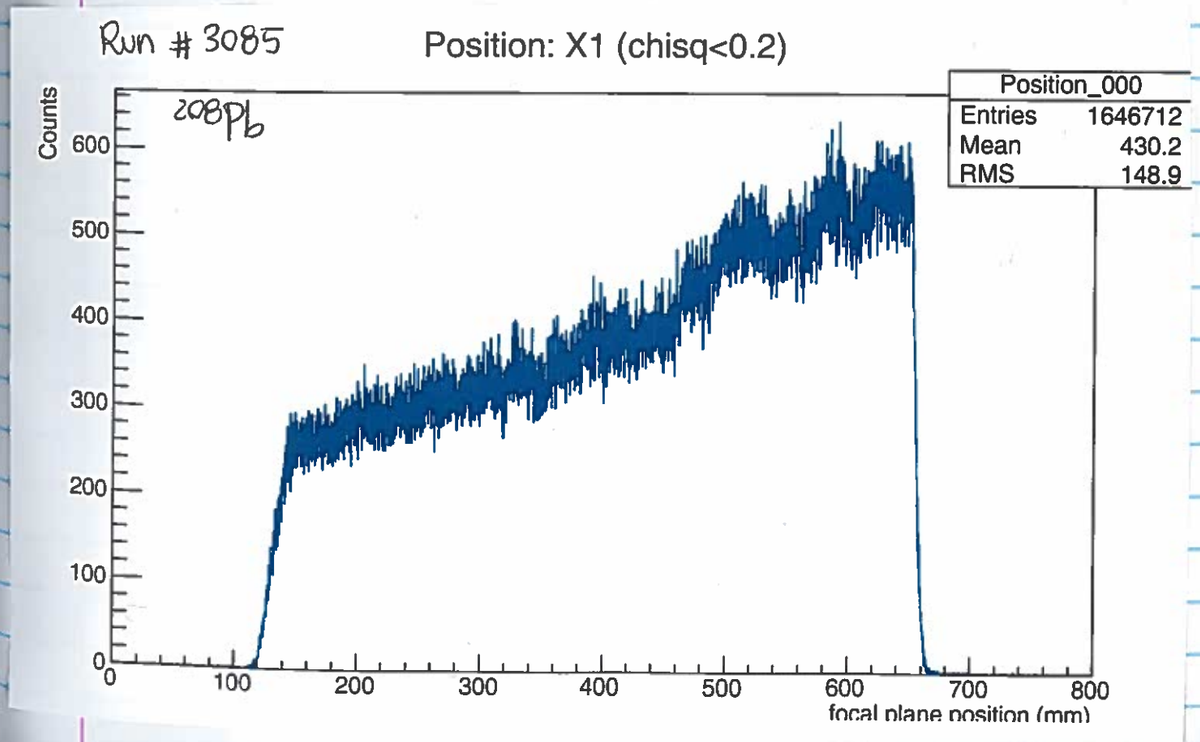
ended at 70 Hz @ 2.6 nA

Run comment: MT
Run #: 3082
Start: 22:37
Stop: 22:48
Target: MT
Target angle: -118
Current: 2,6 nA
CI Range: 6nA
Collimator: #3
Trigger rate: 86 Hz
Data rate: 30 kB/s
Trigger evts: 50434
Scaler evts: 614
K600 angle: 0 deg
K600 field:
Q: S A
D1: S A
H: A A
D2: M A
K: E A
VDC efficiency
X1 93
U1 94
X2 86
U2 94

Run comment: 58Ni
Run #: 3084
Start: 22:51
Stop: 23:51
Target: 58Ni
Target angle: -118
Current: 2,9 nA
CI Range: 6nA
Collimator: #3
Trigger rate: 276 Hz
Data rate: 114 kB/s
Trigger evts: 931980
Scaler evts: 3515
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: M A
K: E A
VDC efficiency
X1 92
U1 94
X2 86
U2 96

Run comment: 208Pb
Run #: 3085
Start: 23:53
Stop: 01:03
Target: 208Pb
Target angle: -118
Current: 2,8 nA
CI Range: 6nA
Collimator: #3
Trigger rate: 708 Hz
Data rate: 298 kB/s
Trigger evts: 2.872 M
Scaler evts: 4123
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: M A
K: E A
VDC efficiency
X1 91.39
U1 94.80
X2 82.93
U2 94.59

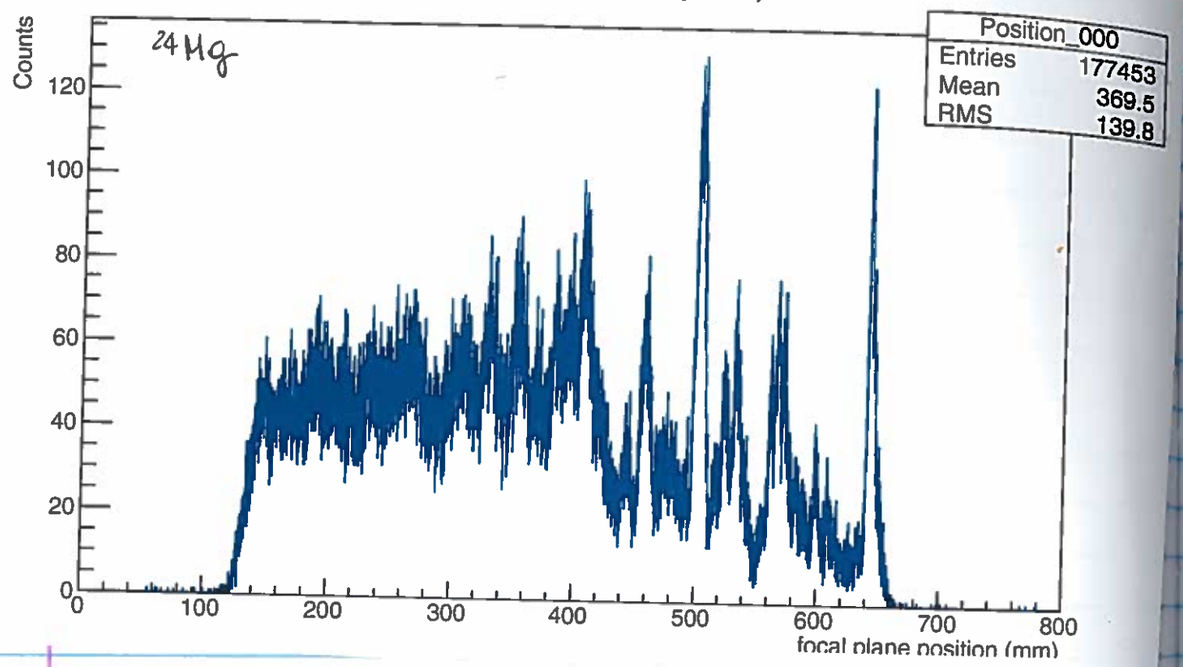




Sat

Run comment: 24 Mg
Run #: 3086
Start: 01:06
Stop: 01:36
Target: 24 Mg
Target angle: −118°
Current: 2.7 nA
CI Range: 6
Collimator: #3
Trigger rate: 196 Hz
Data rate: 87 kB/s
Trigger evts: 362506
Scaler evts: 1767
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: E A
K: A
VDC efficiency
X1 92.69
U1 94.18
X2 87.09
U2 94.57

Run # 3086



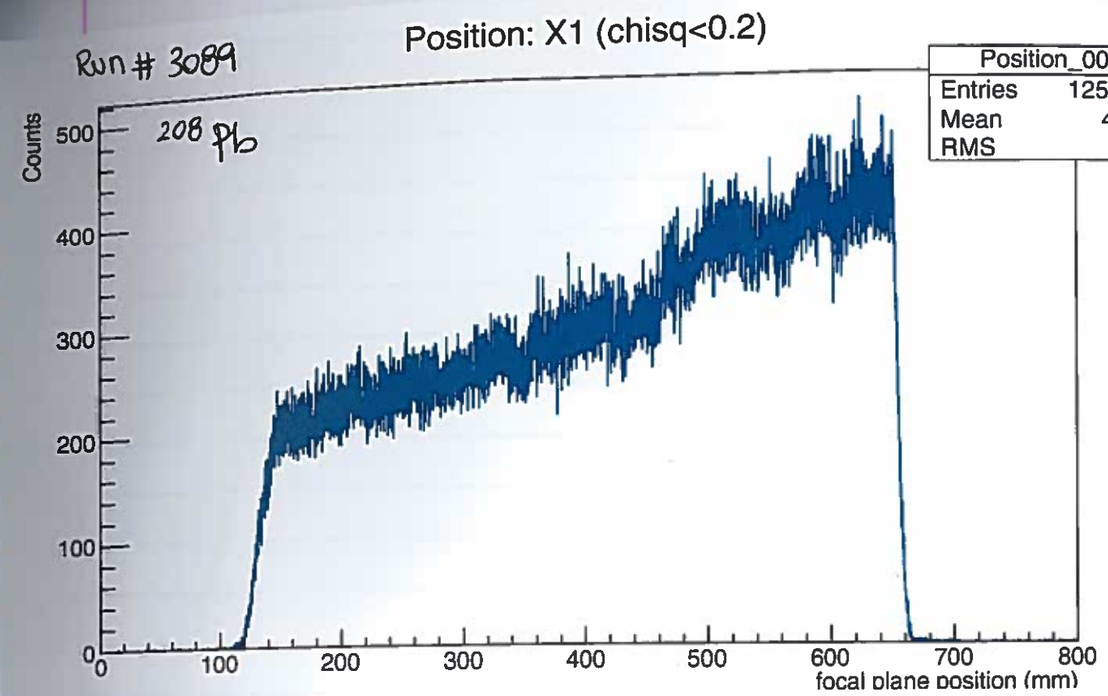
Run comment: EMPTY
Run #: 3087
Start: 01:38
Stop: 01:51
Target: EMPTY
Target angle: −118°
Current: 2.7 nA
CI Range: 6
Collimator: #3
Trigger rate: 92 Hz
Data rate: 37 kB/s
Trigger evts: 75226
Scaler evts: 757
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: E A
K: A
VDC efficiency
X1 93.35
U1 94.61
X2 86.5
U2 94.31

Run comment: 208 Pb
Run #: 3088
Start: 01:52
Stop: 02:53
Target: 208 Pb
Target angle: −118°
Current: 2.9 nA
CI Range: 6
Collimator: #3
Trigger rate: 810 Hz
Data rate: 337 kB/s
Trigger evts: 2.532M
Scaler evts: 3577
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: E A
K: A
VDC efficiency
X1 91
U1 96
X2 82
U2 96

Run comment: 208 Pb
Run #: 3089
Start: 02:54
Stop: 03:56
Target: 208 Pb
Target angle: −118°
Current: 2.5 nA
CI Range: 6 nA
Collimator: #3
Trigger rate: 628 Hz
Data rate: 256 kB/s
Trigger evts: 2.229M
Scaler evts: 3653
K600 angle: 0 deg
K600 field:
Q: A
D1: SA A
H: M A
D2: E A
K: A
VDC efficiency
X1 91.48
U1 94.43
X2 83.06
U2 94.54

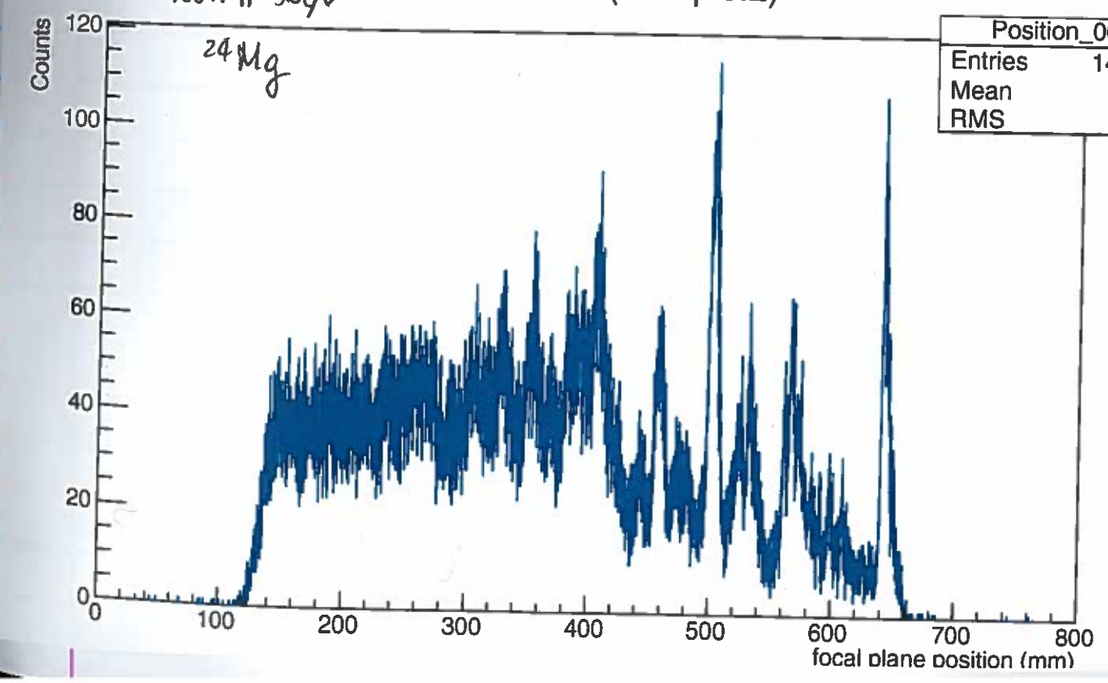
145

Run # 3089



Run comment: 24 Mg
Run #: 3090
Start: 03:58
Stop: 04:29
Target: 24 Mg
Target angle: −118°
Current: 2.7 nA
CI Range: 6
Collimator: #3
Trigger rate: 189 Hz
Data rate: 73 kB/s
Trigger evts: 309017
Scaler evts: 1812
K600 angle: 0 deg
K600 field:
Q: A
D1: S A
H: A A
D2: M A
K: E A
VDC efficiency
X1 92.83
U1 94.23
X2 87.54
U2 94.44

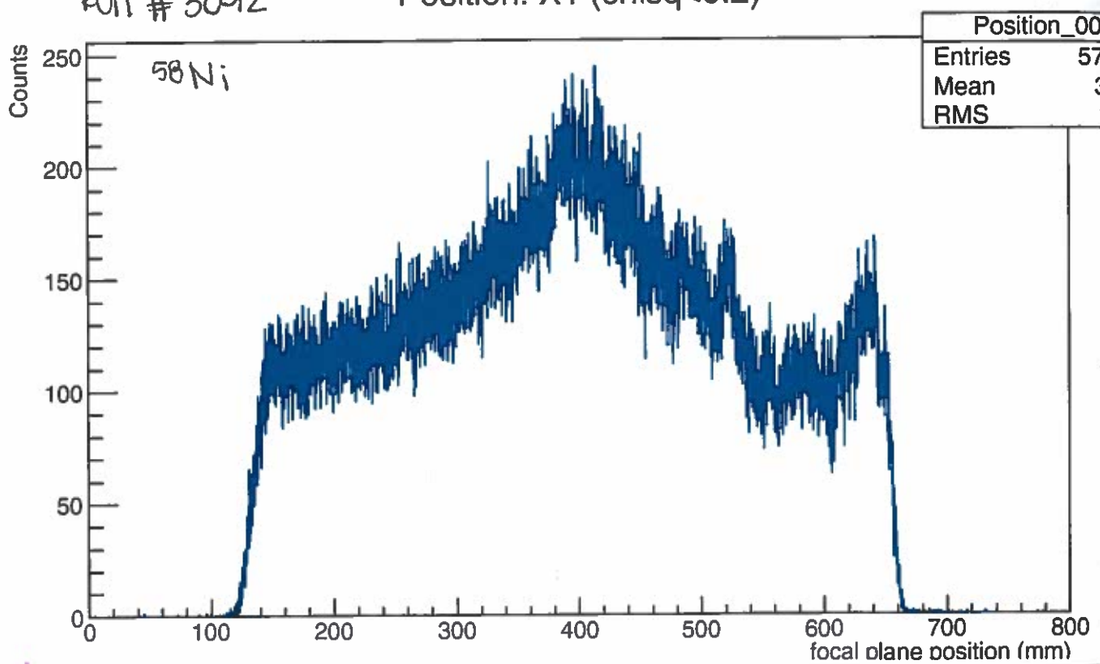
Run # 3090



Run comment: EMPTY
Run #: 3091
Start: 04:31 Current: 2.1 nA
Stop: 04:46 CI Range: 6
Target: EMPTY Collimator: #3
Target angle: -118°
Trigger rate: 70 Hz
Data rate: 29 kB/s
Trigger evts: 70251
Scaler evts: 891
K600 angle: 0 deg
K600 field:
Q: A
D1: SA A
H: A
D2: M A
K: E A
VDC efficiency
X1 93.36
U1 93.92
X2 86.85
U2 94.13

Run comment: 58Ni
Run #: 3092
Start: 04:48 Current: 2.4 nA
Stop: 06:05 CI Range: 6
Target: 58Ni Collimator: #3
Target angle: -118°
Trigger rate: 232 Hz
Data rate: 96 kB/s
Trigger evts: 1.051M
Scaler evts: 4469
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: A
K: E A
VDC efficiency
X1 92.52
U1 94.26
X2 86.39
U2 94.44

Run #3092 Position: X1 (chisq<0.2)



Run comment: 208Pb
Run #: 3093
Start: 06:06 Current: 2.7 nA
Stop: 07:08 CI Range: 6
Target: 208Pb Collimator: #3
Target angle: -118°
Trigger rate: 663 Hz
Data rate: 289 kB/s
Trigger evts: 2.512M
Scaler evts: 3637
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: A
K: E A
VDC efficiency
X1 91.39
U1 94.41
X2 82.87
U2 94.59

Run comment: 24Mg
Run #: 3094
Start: 07:09 Current: 2.5 nA
Stop: 07:40 CI Range: 6
Target: 24Mg Collimator: #3
Target angle: -118°
Trigger rate: 177 Hz
Data rate: 74 kB/s
Trigger evts: 318760
Scaler evts: 1778
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: A
K: E A
VDC efficiency
X1 92.77
U1 94.31
X2 87.19
U2 94.34

Run comment: EMPTY
Run #: 3095
Start: 07:41 Current: 2.8 nA
Stop: 07:53 CI Range: 6
Target: EMPTY Collimator: #3
Target angle: -118°
Trigger rate: 74 Hz
Data rate: 32 kB/s
Trigger evts:
Scaler evts:
K600 angle: 0 deg
K600 field:
Q: A
D1: SA A
H: A
D2: M A
K: E A
VDC efficiency
X1 92.9
U1 94.8
X2 85.9
U2 94.5

Run comment: 208Pb #4
Run #: 3096
Start: 07:56 Current: 2.2 nA
Stop: 08:56 CI Range: 6
Target: 208Pb Collimator: #3
Target angle: -118°
Trigger rate: 560 Hz
Data rate: 240 kB/s
Trigger evts: 1.669M
Scaler evts: 3472
K600 angle: 0 deg
K600 field:
Q: A
D1: SA A
H: M A
D2: E A
K: A
VDC efficiency
X1 92
U1 94
X2 83
U2 95

Beam lit lower limit @ 8.36 for a bit. Had been consistently dropping since the start of the run.

Run comment: 208Pb
Run #: 3097
Start: 08:57 Current: 2.0 nA
Stop: 09:39 CI Range: 6n
Target: 208Pb Collimator: #3
Target angle: -118
Trigger rate: 500 Hz
Data rate: 230 kB/s
Trigger evts: 1.332M
Scaler evts: 2466
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: E A
K: A
VDC efficiency
X1 92
U1 94
X2 83
U2 95.

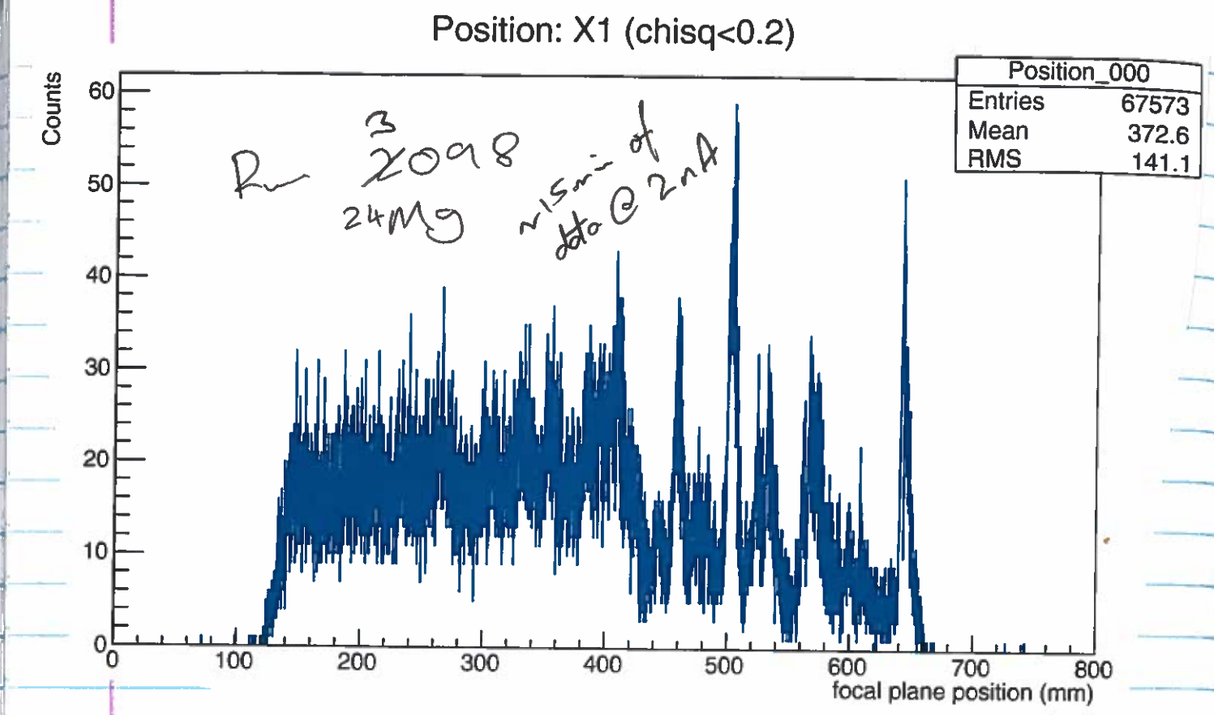
Cup fell in. Stopped run. (Interlocks)

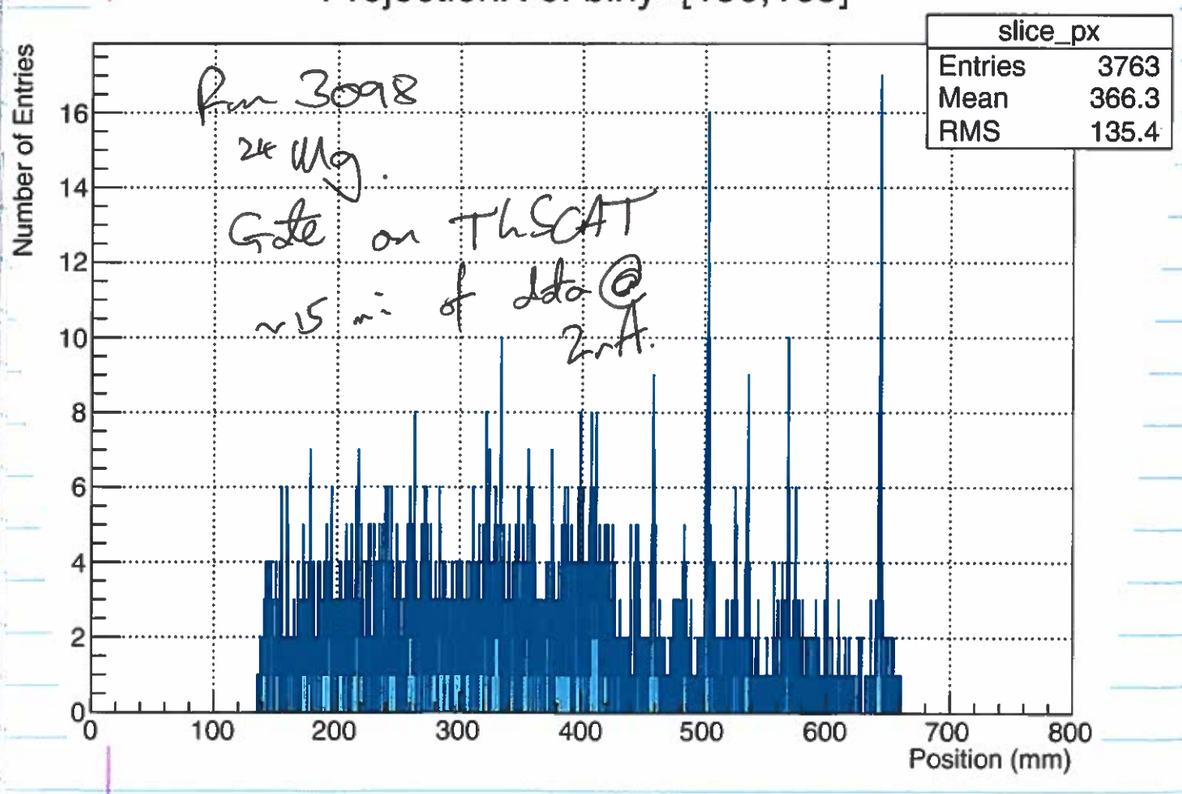
Last run was 40m: → Go to ^{24}Mg

Run comment: 24Mg Calib Check
Run #: 3098
Start: 09:45 Current: 2.2 nA
Stop: 10-19 CI Range: 6n
Target: 24Mg Collimator: #3
Target angle: -118°
Trigger rate: 150 Hz
Data rate: 60 kB/s
Trigger evts: 296529
Scaler evts: 1931
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: E A
K: A
VDC efficiency
X1 93
U1 94
X2 88
U2 94

Run comment: MT Halo Check
Run #: 3099
Start: 10:21 Current: 2.6 nA
Stop: 10:31 CI Range: 6n
Target: MT #1 Collimator: #3
Target angle: -118
Trigger rate: 75 Hz
Data rate: 30 kB/s
Trigger evts: 44761
Scaler evts: 603
K600 angle: 0 deg
K600 field:
Q: S A
D1: A A
H: M A
D2: E A
K: E A
VDC efficiency
X1 93
U1 94
X2 85
U2 94

75 Hz @ 2.6 nA!!





Run comment: 58Ni: Data
Run #: 3100
Start: 10:35
Stop: 11:35
Target: 58Ni: #6
Target angle: -118°
Current: 2.5 nA
CI Range: 6n
Collimator: #3
K600 angle: 0 deg
K600 field:
Trigger rate: 230 Hz
Data rate: 100 kB/s
Trigger evts: 770274
Scaler evts: 3525
Q: S A
D1: A A
H: M A
D2: E A
K: A
VDC efficiency
X1 93
U1 94
X2 86
U2 95

Run comment: 208Pb
Run #: 3101
Start: 11:37
Stop: 12:37
Target: 208Pb
Target angle: -118°
Current: 1-8 nA
CI Range: 6n
Collimator: #3
K600 angle: 0 deg
K600 field:
Trigger rate: 500 Hz
Data rate: 220 kB/s
Trigger evts: 1-662M
Scaler evts: 3474
Q: S A
D1: A A
H: M A
D2: E A
K: A
VDC efficiency
X1 92
U1 94
X2 83
U2 96

Just asking for a little boost in beam current. → 1.4 nA → 1.8 nA.

Run comment: 24Mg
Run #: 3102
Start: 12:39
Stop: 13h09
Target: 24Mg
Target angle: -118°
Current: 1.8 nA
CI Range: 6n
Collimator: #3
K600 angle: 0 deg
K600 field:
Trigger rate: 150 Hz
Data rate: 70 kB/s
Trigger evts: 282127
Scaler evts: 1796
Q: S A
D1: A A
H: M A
D2: A
K: E A
VDC efficiency
X1 93.1
U1 94.3
X2 87.3
U2 94.5

Note from FDS.

To whomsoever changes the targets: you should assess whether the gas bottle + the 'sorbs need changing.

To shifters: you should keep an eye on the VDC efficiencies and on the rate of sparking. If these start to drop/increase (respec.) then the gas bottle + 'sorbs will need to be changed.

Run comment: Empty
Run #: 3103
Start: 13h14
Stop: 13h24
Target: MT
Target angle: -119°
Current: 2.1 nA
CI Range: 6
Collimator: #3
K600 angle: 0 deg
K600 field:
Trigger rate: 69 Hz
Data rate: 33 kB/s
Trigger evts: 50552
Scaler evts: 593
Q: S A
D1: A
H: A
D2: M
K: E A
VDC efficiency
X1
U1
X2
U2

Run comment: 208Pb — K600 angle: 0 deg — K600 field:
Run #: 3104
Start: 13h27 — Current: 2.5 nA — Trigger rate: 660 Hz — Q: S A — VDC efficiency
Stop: 14h29 — CI Range: 6 — Data rate: 296 kB/s — D1: A A — X1 91.5
Target: 208Pb — Collimator: #3 — Trigger evts: 3.223M — H: A — U1 94.5
Target angle: −118.0° — Scaler evts: 3635 — D2: M A — X2 82.9
K: E A — U2 94.6

Run comment: 208Pb — K600 angle: 0 deg — K600 field:
Run #: 3105
Start: 14h31 — Current: 3.1 nA — Trigger rate: 491 Hz — Q: S A — VDC efficiency
Stop: — CI Range: 6 — Data rate: 420 kB/s — D1: A A — X1 91.3
Target: 208Pb — Collimator: #3 — Trigger evts: 3486M — H: M A — U1 94.5
Target angle: −118.0 — Scaler evts: 3627 — D2: E A — X2 82.8
K: A — U2 94.6

Run comment: 24Mg — K600 angle: 0 deg — K600 field:
Run #: 3106
Start: 15h35 — Current: 3.0 nA — Trigger rate: 288 Hz — Q: S A — VDC efficiency
Stop: — CI Range: 6 — Data rate: 117 kB/s — D1: A A — X1 92.6
Target: 24Mg — Collimator: #3 — Trigger evts: 518669 — H: A — U1 94.2
Target angle: −118.0 — Scaler evts: 1762 — D2: M A — X2 85.9
K: E A — U2 94.5

Empty Run 3107
182 Hz @ 3.3 nA.
Ask for tuning → Stopped at 16:09
50 Hz at 3nA Events: 78344
Slit in P-line → moved by 1mm

Run comment: Helio — K600 angle: 0 deg — K600 field:
Run #: 3108
Start: 16:14 — Current: 3.2 nA — Trigger rate: 64.4 Hz — Q: S A — VDC efficiency
Stop: 16:24 — CI Range: 6 — Data rate: 23 kB/s — D1: A A — X1 92.6
Target: Empty — Collimator: #3 — Trigger evts: 32046 — H: M A — U1 94.7
Target angle: −118 — Scaler evts: 563 — D2: E A — X2 89.2
K: A — U2 95.3

Run comment: Ni data — K600 angle: 0 deg — K600 field:
Run #: 3109
Start: 16:26 — Current: 3 nA — Trigger rate: 340 Hz — Q: S A — VDC efficiency
Stop: 17:21 — CI Range: 6 — Data rate: 137 kB/s — D1: A A — X1 92.2
Target: Ni — Collimator: #3 — Trigger evts: 1031M — H: A A — U1 94.3
Target angle: −118 — Scaler evts: 3260 — D2: ME A — X2 86
K: A — U2 94.6

Run comment: 13C data — K600 angle: 0 deg — K600 field:
Run #: 3110
Start: 22:41 — Current: 3.4 nA — Trigger rate: 156 Hz — Q: S A — VDC efficiency
Stop: — CI Range: 6 — Data rate: kB/s — D1: S A — X1 92.7
Target: 13C — Collimator: #3 — Trigger evts: 947891 — H: A A — U1 94
Target angle: −118 — Scaler evts: 3539 — D2: ME A — X2 88
K: A — U2 94.6