

03/01/2011

Beam position calibration,  $I = 400 \mu\text{A}$ ,  $E = 42 \text{ MeV}$ Beam up: $f = 60 \text{ Hz}$ 

Time	Run #	Kick magn current, A	Position of spot	
			up, cm	bottom
7:52 am	1714	0	8	6.3
8:05 am	1715	10	8.5	6.7
8:19	1716	20	8.6	7.2
8:28	1717	30	9	7.5

3/1/11

- $10\frac{1}{8}$ " - distance from front face of Faraday cup to vacuum window as measured from edge of window
- $87\frac{3}{4}$ " - distance from center of radiator cube to vacuum window
- $22\frac{1}{2}$ " - distance from concrete wall on accelerator side to vacuum window
- $91\frac{3}{8}$ " - distance from downstream edge of kicker magnet (as measured on beam right side) to vacuum window
- $96\frac{1}{4}$ " - distance from upstream edge of kicker magnet (as measured on beam right side) to vacuum window
- $81\frac{5}{16}$ " - distance from downstream edge of conical expander to vacuum window
- $91\frac{3}{8}$ " - distance from downstream edge of kicker magnet (as measured on beam left side) to vacuum window.
- $107\frac{1}{2}$ " - distance from center of viewscreen cube to vacuum window

3/1 11:40am

- trying the Faraday Cup calibration again.

- FC configuration cable A gives first 16 channels from bottom beam left, cable B starts on brick #17 + goes through 30.

also "calibrating" the view screen <sup>kicker magnets with</sup> ~~with~~ <sup>with</sup> kicker magnets in up position

### Kicking Beam Up

Time	Run #	Kicker Magnet Current (A)	up (cm)	center (cm)	down (cm)
11:55am	1741	0	8.1	7.3	6.5
12:02pm	1742	10	8.7	7.65	6.6
12:07pm	1743	20	8.9	<del>7.95</del> 7.95	7.0
12:14pm	1744	30	9.4	8.35	7.3
12:20pm	1745	40	9.6	8.55	7.5
12:26pm	1746	50	9.8	8.85	7.9
12:33pm	1747	60	10	9.05	8.1
12:39pm	1748	70	10.3	9.35	8.4
12:45pm	1749	80	10.5	9.5	8.5
12:52pm	1750	90	10.9	9.85	8.8
12:58pm	1751	100	11.1	10.1	9.1

- Ped 0 @ chan 0, 31, 32

### → Kicking Beam Down

→ Run #1752 → lost beam,  
beam position

Time	Run #	Kicker Magnet Current (A)	up	down	center
1:33pm	1753	0	8.5	6.5	7.5
1:39pm	1754	10	8.3	6.2	7.25
1:46pm	1755	20	8.0	5.9	6.95
1:52pm	1756	30	7.6	5.7	6.65
1:58pm	1757	40	7.3	5.5	6.4
2:05pm	1758	50	7.0	5.2	6.1
2:11pm	1759	60	6.8	4.9	5.85
2:18pm	1760	70	6.6	4.6	5.6
2:26pm	1761	80	6.3	4.3	5.3
2:31pm	1762	90	6.1	4.1	5.1
2:41pm	1763	100	5.9	3.9	4.9

1005

- Opened path to experimental cell
- put in collimators
- Aligned everything (fast alignment)
- put in D<sub>2</sub>O target

300mA on beamstop  
42 MeV  
60 Hz

- Radiator out  
triggering on TDC start

= Huge background... why? ← 1 min

Rad in - Polina: 3814 } @ 60 Hz means we have more than 1 ct per pulse  
Imin ct Irina: 3869 } something wrong...

Rad out Polina: 3758  
Irina: 3866

- lowered beam current (to basically nothing as per chad)

Rad out: Polina: 885      Rad in: Polina: 814  
Irina: 2284              Irina: 2210

4:49pm put in viewscreen to verify beamdump.