

3/4/2011

Dr Forost: TDC scale cut in half, from 1000 to 500.

- Set up for 25MeV - put in 25MeV collimation, took out hole sleeves.
- 150 Hz
- ~ 500 mA
- 20ns pulsewidth

Testing FC @ new setup.

8:45am ~ 3 1/2 cm diameter beam size.

Run # 1831

{SCOPE picture # 46 - (FC current)}

9:15am put in Al collimator w/ 3mm gap vertical slit

Run # 1832 - FC brick #20 lighting up on GUI
but nothing in bottom half of GUI

9:40am ~~put~~ did battery test to ADC + FC, all worked good.

Run #
(1834)

trying again, same test.

Run # 1835 - top half lit up

try A FC displacement as ftn of current
bending down.

Run # 1836 (full range of current)

Kicking Beam Down

- Vertical slit ~ 3mm Al collimator in

Run #	K.M. Current (A)	BRICK #
1837	0	23.20
1838	10	23.20
1839	20	17
1840	30	17
1841	40	17, 17 +14
1842	50	11, 14
1843	60	11
1844	70	11.8
1845	80	8.5
1846	90	2.5
1847	100	2

10:49am

moved FC up ~2cm, want to get FC centered on brick #17 @ no current in kicker magnet.

Bending down

Run #	KM Current (A)	bricks lit up
1848	0	17, 14
1849	10	14
1850	20	14, 11
1851	30	11, (lit 8)
1852	40	8 (lit 11)
1853	50	8, 5
1854	60	5
1855	70	2, 5
1856	80	2
1857	90	2

11:35am

Switched Polarity

bending up

Run #	KM Current (A)	bricks lit up
1858	0	17, 14
1859	10	17
1860	20	17 (lit 20)
1861	30	20 (lit 17)
1862	40	20 20 (lit 23)
1863	50	23
1864	60	23, 26
1865	70	26 (lit 29)
1866	80	29 (lit (26))
1867	90	29

brick #20

12:45pm

- put in another collimator that shows only 1 brick to electrons
- kicker magnet off

Run #1868

- Nothing...

1:00pm

Moved Al collimation closer to FC (~3mm away)

Run #1869

1:12pm

Switched Al collimator to place Al bricks vertically, (3mm square gap) exposing only brick #11

Run #1870 - first 30% events, random bricks lit up on GUI, but after 35%, brick #11 slowly became more lit than others. p 75% went to crap again.

1:35pm

- FC test using Dr Dale's 3mm sq collimation and a small optical jack from LDS (Black one)

Run # 1871. Collimating to brick # 11

⇒ Brick 11 lights up. all others virtually dead.

1:40pm

Moved Dr Dale's Collimation up to next brick # 14

Run # 1872

2:07pm

Moved Dr Dale's Collimator - wedged back end as to collimate at an angle to brick # 26... will try to sweep \vec{e} up to hit that brick.

Run # Km (Current (A))

Run #	Km (Current (A))	Notes
1873	0	- Not much lighting up. (bricks 28+30 hottest)
1874	30	- " " "
1875	70	- Nothing.

2:45pm

- removed Dr. Dale Collimation

- put Zinc Sulf Viewing screen in front of FC

- Now we want to calibrate w/ viewing screen.

- also blocked other port, W/ 25 B.

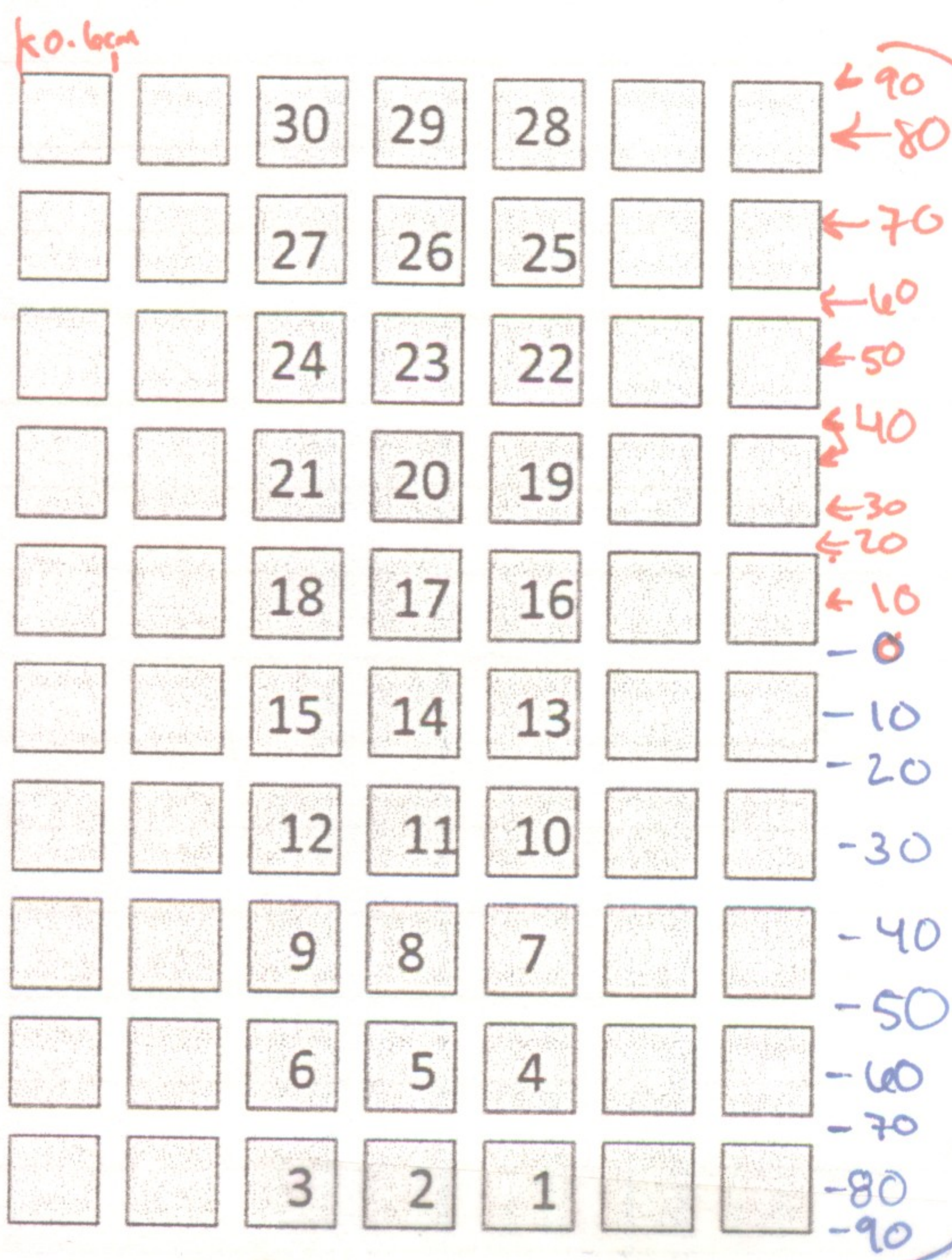
Beam up

Run #	Kicker Current	beam top (cm)	beam bottom (cm)	center (cm)	displacement (cm)
1877	0	1.5	- 2	#0.25	0
1878	10	1.8	- 1.5	+ 0.15	0.4 cm
1879	20	2	- 1	+ 0.5	0.95
1880	30	2.5	- 0.5	+ 1	1.25
1881	40	2.8	0.3	+ 1.25	1.50
1882	50	3.2	0.5	+ 1.85	2.10
1883	60	4.0	0.6	+ 2.30	2.55
1884	70	4.3	1	+ 2.65	2.90
1885	80	4.7	1.6	+ 3.15	3.40
1886	90	5.2	2.0	+ 3.6	3.85
1887	100	5.5	2.5	4.0	4.25

~95 A for 4.1 cm WP

Measured w/
collimators

$E_e = 25 \text{ MeV}$



Kicker Magnet
Current
(A)

Configuration:

3:45pm

Switched Polarity to kicker magnets.

Beam Down:

Run #	kicker Current	beam top (cm)	Beam bottom (cm)	Center	displacement (cm)
1888	0	1.24	-2	-0.25	0
1889	10	1	-2.3	-0.65	-0.4
1890	20	0.8	-2.5	-0.85	-0.6
1891	30	0.4	-3.1	-1.35	1.1
1892	40	-0.2	-3.4	-1.80	1.55
1893	50	-0.8	-3.8	-2.30	2.05
1894	60	-1.2	-4.1	-2.65	2.40
1895	70	-1.5	-4.5	-3.00	2.75
1896	80	-2.0	-4.8	-3.40	3.15
1897	90	-2.3	-5.2	-3.75	3.50
1898	100	-2.6	-5.6	-4.10	3.85
1899	110	-3.0	-6.0	-4.50	4.25

~ 105A for 4.1 cm down

4:27 pm

Kick off - Radiator In

Run # 1900 ~ -3cm to +3cm ~ 6cm beam spot.

4:45 pm

- Removed FC + Viewing Screen
- Put in dump magnet + beam dump setup
- Radiator In

Run # 1901 - 1st attempt @ 25 MeV γ s into experimental cell.

- Messed up TDC channels. start or stop

1700:

fixed software problem

- Run # 1903

can see γ peak + some neutrons.double \sim 150 ns apart (\sim 20cm)was a triple yesterday but we shielded between
| RINA + the wall + we added shielding around 25B port.

Fall of the Start
Rise of the Stop

- TDC