

3/7/11

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Over the weekend Dr Dale built a beam dump in the experimental cell at the wall by the laser.

- TDC Resolution switched to 500ns scale. from 1000ns scale.
- No detector discriminator pulse width changed from 200ns to 80ns.
- Radiator out.
- Dump magnet out.
- lead bricks blocking holes into experimental cell
- looking @ background into experimental cell. no physics target

8:00am Polina - $V=1800$

Run # 1905

5min cts:

Polina: 900 cts / 5 minutes, 934 cts / 5min

TDC spectra scaled from 0 to 500ns, peak was ~ 350 ns, only 150ns left for n^0 .

- adjusted width on start pulse: 60ns \rightarrow 30ns

Run # 1906

Results \Rightarrow moved peak on TDC spectrum from previous adjustment to ~ 200 ns.

- Changed n^0 detector discriminator pulse width from 80ns to 140ns.

Run # 1907

Results: moved peak on TDC spectrum to ~ 100 ns. GOOD

want to get some data:

Run: 1908 - 50K events.

Clearing beam line in shielded cell, (pair spect + sweep magnet)

8:40am

Run # 1909 - 100K events.

Polina - 5min cts 1109 cts / 5 minutes, 1020 cts

8:50am

- unblocking hole in collimation to experimental cell, so unblocked on both sides.
- moving 4 n^0 detectors from scalars to VME crate scalars.
- Dump magnet still out, still no physics target, still no radiator.
- view screen (Zn Sulf) out

- Polina \rightarrow ~~5~~ 5 Sophia \rightarrow 2

Irina \rightarrow Scalar 5

Natali \rightarrow 4

Run # ~~1909~~ 1910

28

9:10

Radiator InRun # 1911 \rightarrow TDC γ peak

9:20am

Radiator In, sweep magnet out, open collimator

- Put in Lead brick as target (1" oriented @ 45° to beam)Run # 1912 \rightarrow lots of neutrons, \bar{p} γ flash, but no noticeable γ 's from target.

9:28am

Radiator out

Run # 1913

Let's look for asymmetry in 1" lead target

9:35am

- Radiator In

- Kicker magnets on, bending down w/ 105A (~ 4.1 cm)Run # 1914 \sim 100K events

9:40am

- Radiator In

- Kicker magnet on, bending up w/ 95A (~ 4.1 cm)Run # 1915 \sim 100K events

(Run # 1915 - forgot to turn on current)

10:19am

Put in sweep magnet and beam dump, lead around sweep magnet + some graphite

Kicker magnet off

Radiator In

Run # 1917

10:33am

lowered Thresh on Polina from -100mV to -200mV

to match others, Sofia is ~ -105 mV, Irina + Natili is ~ -200 mV

Removed lead target and stand.

Run # 1918

10:40am

Radiator out

Run # 1919

10:52am

- put in water stop
- Radiator Out
- Sweep magnet in

Run # ~~1920~~ 1920

⇒ No difference in γ -double peak.

11:00am

- plugging collimation hole with more lead to see if γ 's are coming from down hole. ($\sim 8''$ more lead)
- water stop out, Radiator In

Run # 1921 (50k events)

11:23am

~~Analysis is moving~~

Gate Value in

Run # 1922

- empty spectrum

11:30am

- Gate Value open

- Radiator In

width of start pulse is 30ns

Separated start pulse and stop pulse.

Run # 1923

11:46am

- Removed 8'' of lead in front of collimation hole

- put in D₂O target

- Radiator In

- Sweep magnet in

- Physics Target: D₂O

Run # 1924

12:01pm

- Target out

Run # 1925

30

12:20pm

- Removed lead in front of Iaina, so no lead in between Iaina + Target
- Put in D₂O Target
- Radiator in

Run # 1926, big γ peak in Iaina12:30pm

- Removed D₂O physics target to see if γ peak vanishes

Run #

- Added shielding to other 44 MeV port. (Halid's port)

Run # 1927 - 2 orders of mag lower γ -peak

- multihit problem w/out shielding.

12:49

Checking Iaina count rates: 605cts/60 seconds \Rightarrow 0.07^{cts}/pulse
@ 150 Hz

1:15pmD₂O physics target in

Run # 1928 - hoping to get same peak as Run # 1926

 \Rightarrow Results show same peak as in Run 19261:40pm - Radiator in. No physics target.

- Removed lead in front of all no detectors as to find γ -flash

Run # 1929

1:47pm~~D₂O physics target~~ Redo previous Run # 1929 to shift γ -peak to lower channel

Run # 1930

2:pm - D₂O physics target in

- Rad in

- Sweep magnet still in

Run # 1931 - good peaks - (γ peaks)2:28pm

- Re installed shielding around no detectors. (4" lead)

- Kicker current = 95A bending up

- Radiator in

- D₂O physics target

Run # 1932 (45 minute counts)

Iaina 13765 counts / 45 minutes

3:20pm

Switched polarity on Kicker Magnet to bend down w/ 105A

D₂O physics target in

Run # ~~1933~~ 1934

(1933 was a false start)

IRIN 3940 ~ 45 minutes

4:15pm

Switched polarity on Kicker magnet to bend up w/ 95A

D₂O physics target in

Run # 1935

IRINA 4650 | 15 minutes

4:35pm

Switched polarity on Kicker magnet to bend down w/ 105A

D₂O Physics target in

Run # 1936

IRINA: 4876 | 15 minutes

4:55pm

Kicker Magnets off

D₂O Physics target

Run # 1937