March 3, 2011

- UuvwA (big flat paddle detector) was placed at the end of the beam line right in front of the laser in experimental cell
- Beam dump shielding was changed - but removed sweeper magnet for beam tuning.
- a iron rod was placed inside upstream iron collimator in center hole (e⁻ hole)
- lead is blocking photon hole (off axis hole) in both upstream + downstream areas

8:40 am
- beam - tune up
  - faraday cup in
  - Zinc Sulf view screen in.

Current - 200mA
Energy - ~41 MeV (a little under) (40.5 MeV)
Rep Rate - 150 Hz

8:46 am
Run # 1800 - Radiator out
- lead blocking both upstream collimator + downstream collimator
- Faraday cup in
- ZnSulf screen in front of Faraday Cup.
- forgot to pedistal

Run # 1801 - Rad out
- gate in for ~4000 events
- GUI says top half Vdet lights up but bottom half too nothing.
- try reducing current

Run # 1802 - lowered current to ~100 nA - Rad out
- gate in for ~2000 events
- GUI says all channels lit up, only took ~20K events + stopped run to look at ADC spectrum.

Run # 1804 - Rad out
- Cut current to 50mA
- gate closed for ~2500 events.
- Ran for about ~50K events
- looks like beam drifted to left which corresponds to GUI output but a few channels on GUI looked dead.

9:25am =
Made a slit to faraday cup showing only 6th row from bottom.
blocking w/ copper 4". [~1/8" gap on bricks 16, 17, 18]

9:38am: Run # 1805
Gate in for ~ 2000 events.
28, 25, 26, 22 had ADC spectrum, but nothing on 18, 17, 16.

10:02 am Run # 1806
- Collimated using 2" Al with small hole centred on #17 (brick
With first 2" and behind that 2" Al is another 2" Al with vertical slit
Should light up brick #17, but # 20, 22, 23 were lit up.

10:10am - bending beam down w/ 75 Amps.
Run # 1807
- No spectrum on any channels.

10:20am
- adjusting Al collimation such that a vertical slit will be exposed to FC.
over center column - Kicker magnet off
Run # 1808
Gate closed for ~3000 events.
GUI Lighting up bricks 17 + 20 - ADC spects show Nothing on those channels.

- Turn on kicker Magnet
- down w/ 75 Amps.
Run # 1809
Gate closed for first ~3000 events
GUI says bricks 11 + 14
A

- Increasing current ~~by~~ factor of 4
(should be ~200 nA)
- Kicker magnet off.
Run # 1810
Gate closed for ~ 3000 events
GUI says brick 29 very active.

11:00am

- Increasing current to highest we can get.
- Put in Al Collimation with a 0.4cm Vertical Slit centered on FC center column.

Run #1811
- GUI bricks that light up are 19, 22, 24
- Adc has good spectrum for

Run #1812
GUI gives nothing (all neg)
ADC 25 is good, 26 is good, 27 good.
- middle where be is supposed to be is crap.

- turned on kicker magnet - bending down with 75 Amps.

Run #1813
GUI - only neg signals. } determined we need more current from
ADC: Not much. } beam to get FC to work.

-> - Removed ~~...~~ FC
- Put in ~~...~~ Dump magnet, took out beam hardner.
- Put shielding (Lead + Graphite) around flange after dump magnet.
- Paddle detector Uwo MA placed on back wall below laser.
  - thresh ~ -200 mV, 200ns pulse width.
  - Voltage @ ~~...~~ ~974 V
  - using as TDC start

1:45pm - Radiator In, Lead target in.
Run #1815
- look like good γ-peak + maybe some neutrons on SophiA
  - need more statistics.

2:10 pm - Rad in, Lead target in
Run #1816
- getting multiple pulses off start trigger
  - lowered A voltage to -800V

2:16pm - Rad in, Lead target in
Run #1817

- lowered Voltage in Uwo MA to -570V so no pulses without beam.

2:50pm Rad in - No target
Run # 1818
- messed up something. CODA has errors.

3:20pm Switched start back to gun trigger. (Coda works now)

Run # 1822: Radiator In, Target out.
- ~300k events.

4:07pm
Placed 2" Pb brick in target position @ 45° wrt beam as to face Polina.
- Put trigger back to Lusha (using ⊓⊔, not ⊔⊓)

Run # ~~1822~~ 1824 - (Radiator In)

4:27pm (Run # 1825 - June)
- Radiator out: went back to triggering off gun.
Run # ~~1823~~ 1826 ⇒ high energy γ's from radiator

4:52pm
- placed a 1/2" slab of Al at end of pair spect magnet
- Radiator In.

Run # 1827

- Switching to 25MeV