Group meeting 6/23/2017

Wire chamber operations:

Turning on the "small" wire chamber:

1. Turn on the chamber gas. Usually run Ar:CO2 at 80:20. Check the flow settings on the paper note posted above the flow tubes. We're running the detector at 2 cc/s. Turn on the small gas valves on the outputs of the Ar and CO2 gas regulators. Want gas regulators set at 5 psi: never change the regulator settings, and never close the "big" valve on the tanks.
2. For the little chamber, wait about 1 hour before turning on the HV.
3. Turn on the low voltage. This is the power supply on the table. The on/off switch is on the left of the panel. LV runs the electronics. Needs +5, -5, and ground. Current draw for the small detector is about 0.3 amp on the +5 and 0.3 amp on the -5.
4. Wait 1 hour.
5. Turn on the HV. This is the Bertan PS in the NIM crate. First turn on the NIM crate, then turn on the left channel of the Bertan. The chamber uses positive HV, which is the left channel in the Bertan module. "Slowly" increase voltage, with the HV supply in the "Trip Hold" mode (there's a toggle switch on the front panel for this, don't use "Auto Reset"). Keep the Bertan current meter at 1mA full scale. Bring voltage to 2020 V. The best way to monitor the HV output is to connect the voltmeter to the voltage monitor output of the Bertan supply (100 V output from Bertan = 0.1 volt on the voltage monitor). So for example, to get +2020 V, voltmeter reading would be 2.02V.
6. Ready to take data, take measurements, …

Turning off the detector:

1. Run down the HV on the Bertan PS. Then turn off the HV at the front panel of the Bertan.
2. Turn off gas at the small valves on the gas regulators. Should see the floats in the gas flow meters starting to drop. Don't change regulator settings, and don't turn off the big valve on the tanks.
3. Turn off the LV.
4. Done.