G_E^n **Status**

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University of Kentucky

October 21, 2005

Outline

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G_E^n **Target**

Big Picture

1. 6+2 in spec cells ready; being characterized. Second oven is here.

2. Target ladder and drive system in production.

3. Optics design ready. Combiner in use in lab; works well.

4. Magnetic compass being commissioned and tested. Measurement setup designs to follow soon, and then the beamline.

5. Polarimetry well under way.

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BigHAND Progress

Hall A Neutron Detector

Current Status

1. All detectors (except the Glasgow ones) including electronics are connected to the DAQ.

2. For the Glasgow detectors, one cassette is in, two more ready to be craned in. Bars to be put in the cassettes starting today.

3. Most DAQ channels are OK. A few have problems. That is being identified and fixed.

4. Ringing and oscillations observed in the N20 electronics, most likely at the preamplifier. Somewhat fixed.

5. Lot of people working on the ND and BigBite classes in the G_E^n Analyzer.

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N20 Analysis Results

N20 test run

1. Rates analysis using scalers and TDC complete (minus PMT gains and threshold corrections - being worked on by Kalyan).

2. Sharon Beck and Rich Holmes working on the N20 data analysis.

3. Xin Qian simulating the N20 test rates, to compare with the actual rates observed.

4. The following rates (in MHz) are for run number 2289: 9μA; 4cm LH_2 target.

.056	.165	.042	.038	.054	-	.042
.053	.040	.030	.018	.015	.0059	.024
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Outline

1. G_E^n Target

2. The BigHAND
   - BigHAND Progress
   - N20 Test Results

3. **BigBite for G_E^n**
   - Wire Chamber Test Run
   - Current Status

4. Towards G_E^n

BigBite

Beam test

1. Wire chamber test run conducted in mid-July.

2. Data was taken with different targets and luminosities.

3. Rate per wire was extracted as a function of luminosity. (Brandon)

4. The luminosities, $\sim 10^{35}$ cm^{-2}s^{-1}, were far below those during the actual experiment.

5. Seamus looking at the event tracks.

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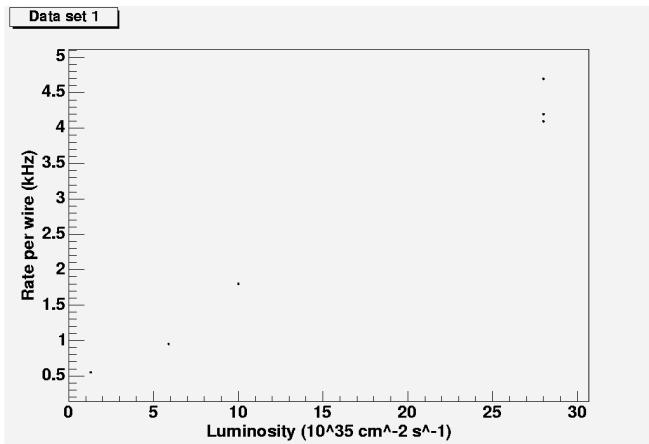5. Seamus looking at the event tracks.

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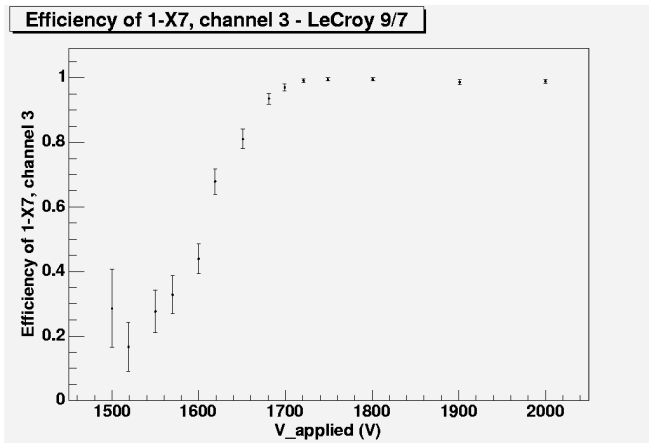
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Wire Chamber Test Run

BigBite

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Efficiency of 1-X7, channel 3 - LeCroy 9/7

Current Status of BigBite

Cosmics data

1. Chambers 1 and 2 completely ready.

2. Cosmics data taken in the nights.

3. Looked at efficiency and time resolution.

4. Amplifier cards (Nanometric) are very sensitive in picking up outside noise and amplify it generating signals at a very high rate (KHz-MHz).

5. Chambers 1 and 3 have both primed and unprimed planes whereas chamber 2 has no primed planes.

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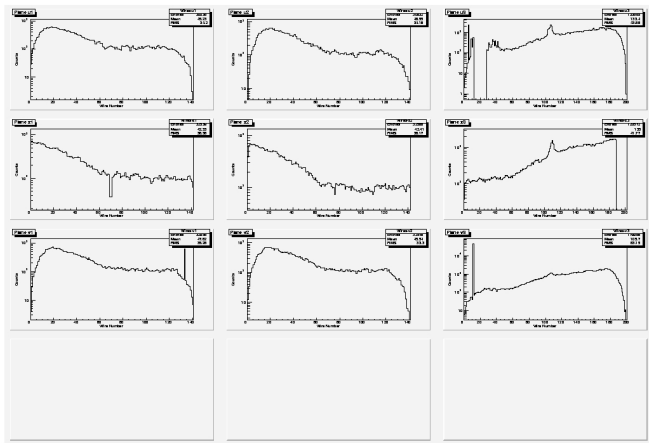5. Chambers 1 and 3 have both primed and unprimed planes whereas chamber 2 has no primed planes.

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Towards G_E^n

On schedule!

Begin installing after Thanksgiving. Data taking in late February!