g12 Status

Paul Eugenio
on behalf of the g12 run group
g12 Run Summary

**g12 run period** April 1 – June 9, 2008

DAQ rate ~8kHz ~126 TBytes ~700 Runs ~63,100 files

### Production Data

- \( I = 60-65 \text{ nA} \)
- \( E_\gamma = 3.584 - 5.453 \text{ GeV} \)
- 26.2 Billion events
- mixed triggers

### Low Intensity Data

- \( I = 24 \text{ nA} \)
- \( E_\gamma = 2.857 - 5.453 \text{ GeV} \)
- 1.0 Billion events
- trigger 1 or more tracks

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E\(e^-\) 5.715 GeV
Kaons in the final state

\[ \text{K}^*(892) \rightarrow \text{K}^- \pi^+ \]

- Mean: \(893.7 \pm 1.1\)
- \(\sigma = 34.3 \pm 1.9\)
Exclusive $3\pi$ events

$\gamma p \rightarrow (n) \pi^+ \pi^+ \pi^-$

All $E_\gamma$

$E_\gamma > 4.40$ GeV

$\sigma \sim 30$ MeV

$\sigma_{g6c} \sim 20$ MeV
Exclusive $3\pi$ events

$$\gamma p \rightarrow (n)[\rho \pi, f_{\gamma} \pi] \rightarrow (n)\pi^+ \pi^+ \pi^-$$
Calibrations and Cooking

Status: Pass 0 v0, v1, v2 completed

<table>
<thead>
<tr>
<th>Item</th>
<th>Contact</th>
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</thead>
<tbody>
<tr>
<td>Analysis Coordinator</td>
<td>Lei Guo (LANL)</td>
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<tr>
<td>Cooking</td>
<td>Johan Goetz (UCLA)</td>
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<tr>
<td>Start Calibration</td>
<td>Mukesh Saini (FSU)</td>
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<tr>
<td>Tagger Calibration</td>
<td>Mukesh Saini (FSU)</td>
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<tr>
<td>Drift Chamber Calibration</td>
<td>Burnham Stokes (GWU) &amp; Daine Schott (FIU)</td>
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<tr>
<td>TOF Calibration</td>
<td>Craig Bookwalter (FSU)</td>
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<td>EC Calibration</td>
<td>Michael Wood (USC)</td>
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<td>Cherenkov Calibration</td>
<td>Rakhsha Nasseripour (GWU)</td>
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<tr>
<td>IC Hodoscope Calibration</td>
<td>Johan Goetz (UCLA)</td>
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</tbody>
</table>
Tagger Calibrations

Mukesh Saini, FSU
TOF Calibrations

Craig Bookwalter, FSU

σ ~230 ps

beta vs p, all tracks, Run 56855

SC mass sq., Run 56855

CLAS Offline Technical Working Group September 25, 2008
DC Time Residuals Averages

<table>
<thead>
<tr>
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<th>pass0</th>
<th>pass1</th>
<th>pass2</th>
<th>pass6 (before july align. change)</th>
<th>pass6.1</th>
<th>pass7</th>
<th>pass8 (beta cut)</th>
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</table>

g11 was able to get the narrow sigma down to 250 microns and g12's is around 275 microns.

Is it reasonable to have 250 microns as a calibration goal?
Open Issues

ST

* We still don't understand the $v_{\text{eff}}$ for the ST nose region

TOF

* Fix bug in sc_dedx.c -> tbid2dedx function
* Reconciling differing results between
  SEB-family banks and PART-family banks
* Reconciling resolutions between experiments
  - $\sigma_{g12} \sim 230$ ps compared to $\sigma_{g11} \sim 190$ ps

DC

* $g11$ was able to get the narrow sigma down to 250 microns and $g12$'s is around 275 microns.
  - *Is it reasonable to have 250 microns as a calibration goal?*

General Issues

* Calibration and Cooking is too fragmented. Run groups can benefit from more formal communications, i.e. The g10/g11 model.