PIONS AT 20 A-GeV

M.G.

- FIRST RESULTS
  - NEXT STEPS
DATA SET

- CENTRAL (7%) Pb+Pb Collisions
  At 20 A GeV ($<N_{ch}> \approx 349$)

- 20 A GeV:
  $\sqrt{s} = 6.27$ GeV, $F = 1.92$ GeV$^{1/2}$, $\gamma_{CM} = 1.88$

- Number of Analyzed Events
  5000 Out Of 364 K

Run 4830
ANALYSIS

- PROCEDURE (PROGRAMS) AND CUTS THE SAME AS FOR 30/40/80/160 AGeV

- CORRECTIONS:
  - GEO ACC FOR 20 AGeV
  - VENUS FOR 20 AGeV
  - EFF. AS FOR 40 AGeV IN Y*

- RESULTS PRELIMINARY
- LARGE SYS. ERROR
GEOMETRICAL ACCEPTANCE

pt vs y acceptance table

2003/08/06 14.18
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>$T(\pi^-)$(MeV)</td>
<td>154 ± 2.6</td>
<td>165 ± 3 ± 15 (±)</td>
<td>169 ± 2 ± 10</td>
<td>179 ± 3 ± 10</td>
<td>180 ± 3 ± 10</td>
</tr>
<tr>
<td>$T(K^+)$ (MeV)</td>
<td></td>
<td>165 ± 3 ± 10</td>
<td>232 ± 3 ± 6</td>
<td>230 ± 5 ± 6</td>
<td>232 ± 4 ± 6</td>
</tr>
<tr>
<td>$T(K^-)$ (MeV)</td>
<td></td>
<td></td>
<td>226 ± 3 ± 6</td>
<td>217 ± 3 ± 6</td>
<td>226 ± 9 ± 6</td>
</tr>
<tr>
<td>$dn/dy(\pi^-)$</td>
<td>84 ± 8</td>
<td>32 ± 9</td>
<td>106.1 ± 0.4 ± 6</td>
<td>140.4 ± 0.5 ± 7</td>
<td>175.4 ± 0.7 ± 9</td>
</tr>
<tr>
<td></td>
<td>72.3</td>
<td>(80 ± 8)</td>
<td>96.6 ± 0.4 ± 6</td>
<td>132.0 ± 0.5 ± 7</td>
<td>170.1 ± 0.7 ± 9</td>
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<tr>
<td>$dn/dy(K^+)$</td>
<td></td>
<td></td>
<td>20.1 ± 0.3 ± 1.0</td>
<td>24.6 ± 0.2 ± 1.2</td>
<td>29.6 ± 0.3 ± 1.5</td>
</tr>
<tr>
<td>$dn/dy(K^-)$</td>
<td></td>
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<td>7.58 ± 0.12 ± 0.4</td>
<td>11.7 ± 0.10 ± 0.6</td>
<td>16.8 ± 0.2 ± 0.8</td>
</tr>
<tr>
<td>$\langle \pi^- \rangle$</td>
<td>2.17 ± 2.15</td>
<td>2.70 ± 2.75</td>
<td>322 ± 3 ± 16</td>
<td>474 ± 5 ± 23</td>
<td>639 ± 17 ± 31</td>
</tr>
<tr>
<td>$\langle \pi^+ \rangle$</td>
<td>184.5</td>
<td></td>
<td>293 ± 3 ± 15</td>
<td>446 ± 5 ± 22</td>
<td>619 ± 17 ± 31</td>
</tr>
<tr>
<td>$\langle K^+ \rangle$</td>
<td></td>
<td></td>
<td>59.1 ± 1.9 ± 3</td>
<td>76.9 ± 2 ± 4</td>
<td>103.0 ± 5 ± 5</td>
</tr>
<tr>
<td>$\langle K^- \rangle$</td>
<td></td>
<td></td>
<td>19.2 ± 0.5 ± 1.0</td>
<td>32.4 ± 0.6 ± 1.6</td>
<td>51.9 ± 1.9 ± 3</td>
</tr>
</tbody>
</table>

\[
\frac{dn}{m_T dm_T dy} = C e^{-m_T/T}
\]
\[
\frac{dN}{dy} = N \left[ e^{-\left( y + y_0 \right)^2/(2a^2)} + e^{-(y + y_0)^2/(2a^2)} \right]
\]
NEXT STEPS

- FINAL dE/dx SPECTRA
- FINAL EFF CORRECTIONS (EMBEDDING)
- VENUS AT 80, 158 AGEV
- P_T/m_T SPECTRA VS Y
- π^+/π^- RATIO FROM TOF AT 20, 30 AGEV
- PUBLICATION