Rate Expectation for CROME

CROME Collaboration:

Karlsruhe Institute of Technology

October 7, 2010
CROME Simulation

Showers
- GH profile;
- LDF using Gora function;
- time compression;
- linear scale;
- Microwave yield for absolute scale

Array parameters
- \( E \geq 2 \times 10^{16} \) eV;
- \( E^{-3} \) spectrum;
- zenith \( \leq 40 \) deg;
- shower core in Kascade Grande;
- 3 physical events per day above \( 10^{17} \) eV.
CROME Simulation

Trigger Rate

<table>
<thead>
<tr>
<th>energy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Entries</td>
<td>7000</td>
</tr>
<tr>
<td>Mean</td>
<td>16.52</td>
</tr>
<tr>
<td>RMS</td>
<td>0.2136</td>
</tr>
<tr>
<td>Underflow</td>
<td>0</td>
</tr>
<tr>
<td>Overflow</td>
<td>0</td>
</tr>
<tr>
<td>Integral</td>
<td>5.85</td>
</tr>
<tr>
<td>Skewness</td>
<td>1.857</td>
</tr>
</tbody>
</table>

6 events per day above $2 \times 10^{16}$ eV.
1 event per month above $2 \times 10^{16}$ eV.