

Analysis of the Elastic peak in $ep \rightarrow ep'$ using different cooked versions of Run 2391

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1 About the run 2391

The details about this run can be accessed from this link:
<https://logbooks.jlab.org/entry/3594539>.

2 Cooking version 5c.6.4

The elastic scattering events were binned in a total of 8 angle bins in the range, $\theta_e = [8.0^0, 22.0^0]$ for each sector. The overall spectrum looks like in Fig 2.1

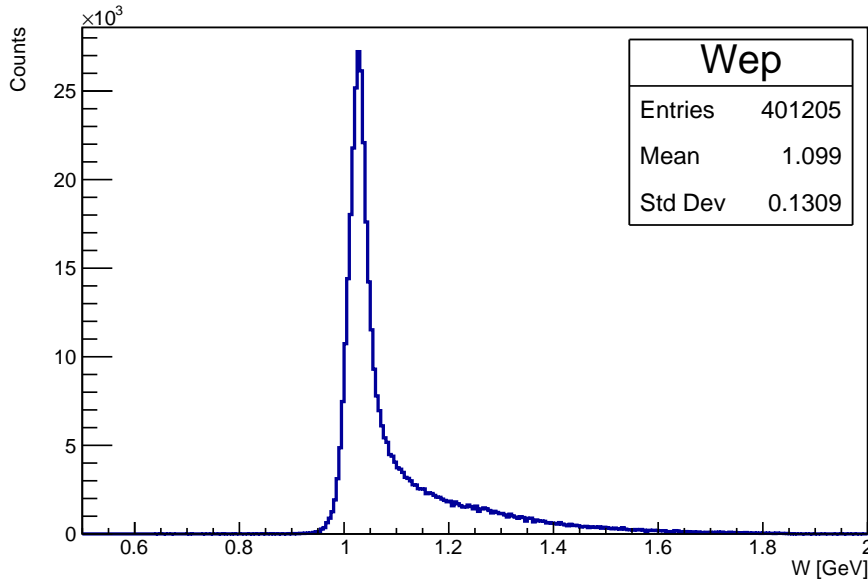


Figure 2.1: Global spectrum for the elastic ep scattering. Only events with $|MM(ep \rightarrow ep')| < 0.01$ GeV are selected.

3 W distribution and Gaussian Fits

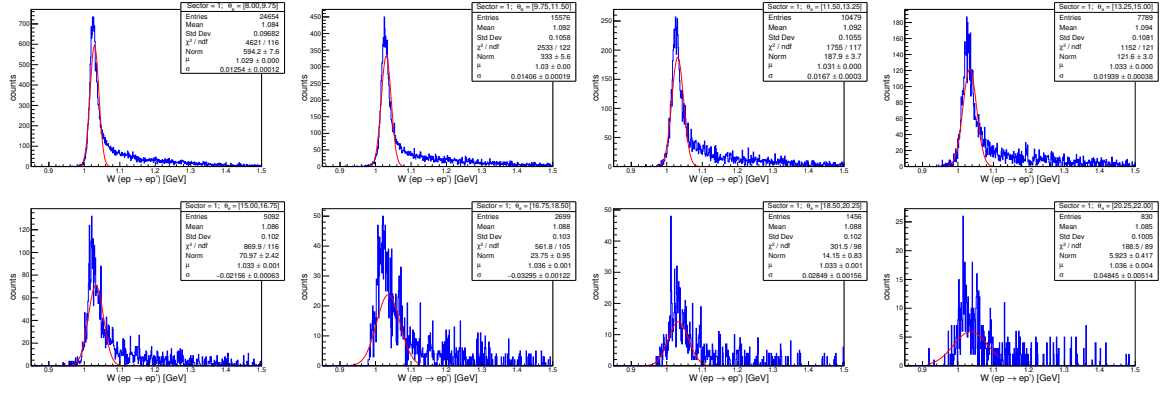


Figure 3.1: W distribution for Sector 2.

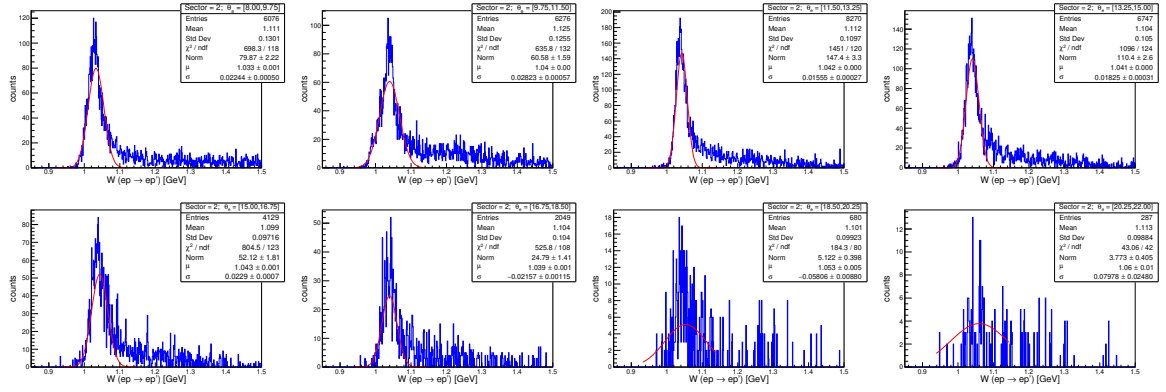


Figure 3.2: W distribution for Sector 2.

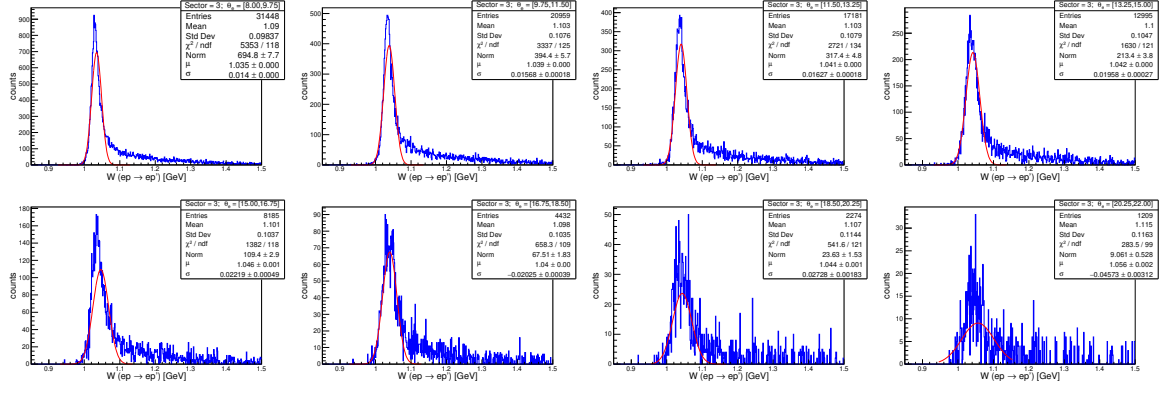


Figure 3.3: W distribution for Sector 3.

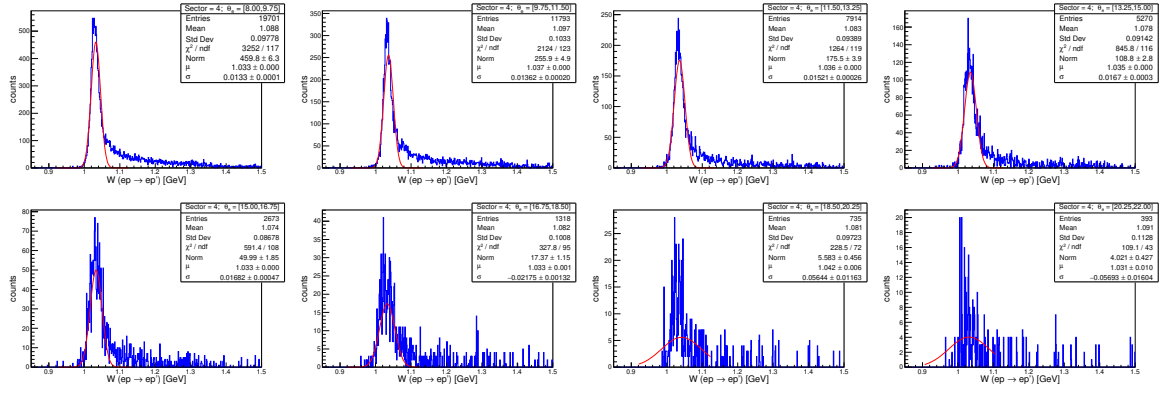


Figure 3.4: W distribution for Sector 4.

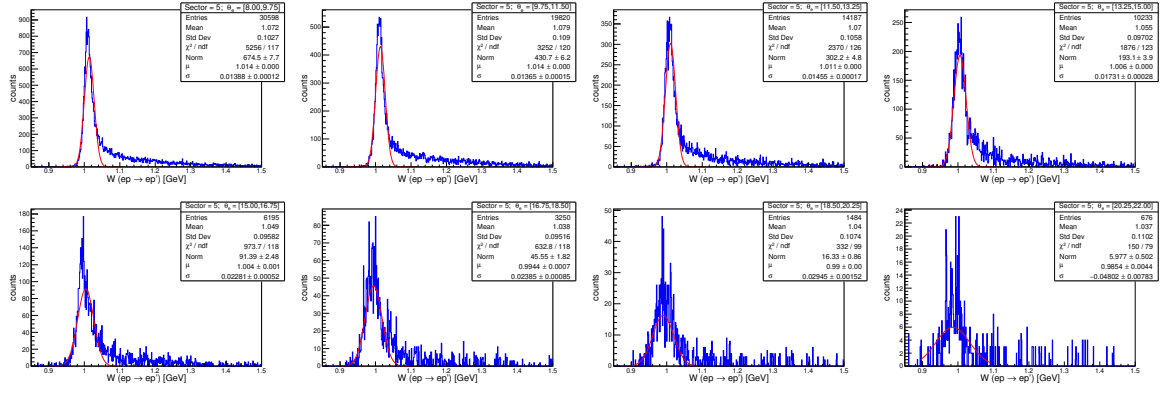


Figure 3.5: W distribution for Sector 5.

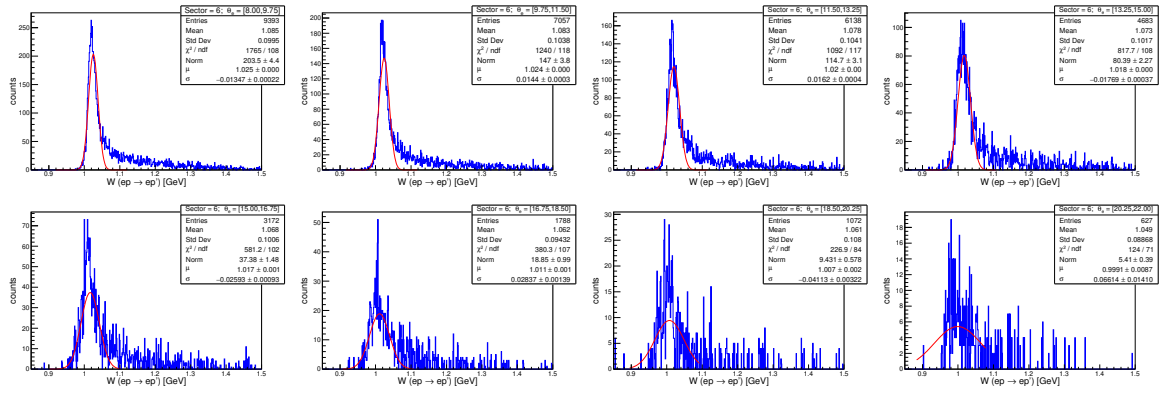


Figure 3.6: W distribution for Sector 6.

4 Elastic peak: centroid and resolution

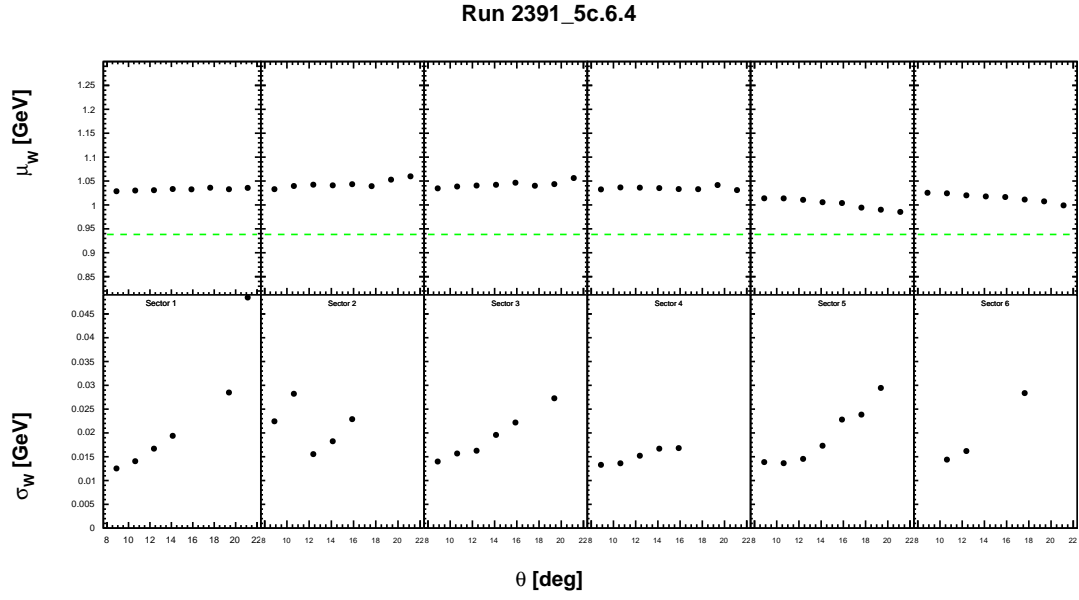


Figure 4.1: Elastic peak position from the fit for each sector. Dashed line in green is to guide the eye ($W = 0.94$ GeV)