

Unpolarized Radiative Corrections

Integration Thresholds

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Outline

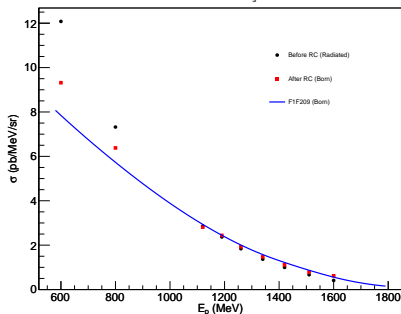
- 1 Unpolarized Radiative Corrections
- 2 Summary

Threshold Studies (1)

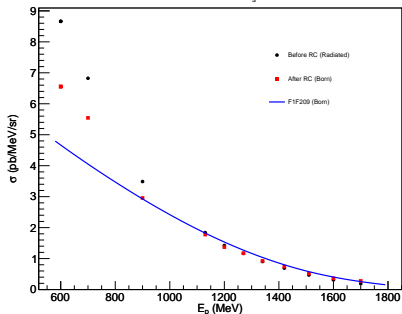
Integrating From the QE Threshold

- Discovered a mistake in the unfolding from the QE threshold
 - ▶ Didn't update the models to include the rest of the phase space (relative to π -threshold)!

Radiative Corrections at 4-pass ($E_s = 4730$ MeV, $\theta = 45^\circ$)



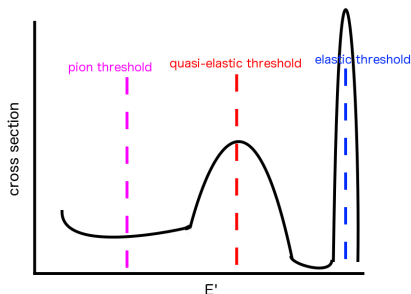
Radiative Corrections at 5-pass ($E_s = 5890$ MeV, $\theta = 45^\circ$)



Threshold Studies (2)

What Does Changing the Threshold Do?

- We include more of the phase space (E_p vs. E_s)
- In terms of cross sections:

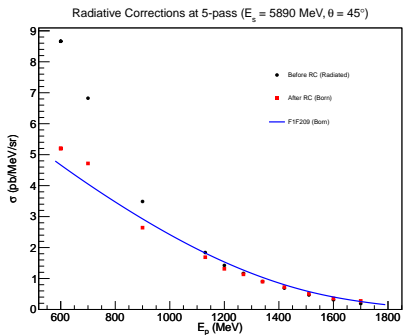
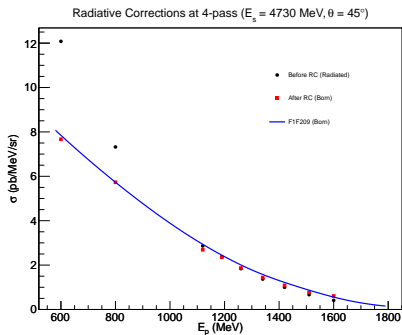


- If we integrate using the **elastic** threshold, we will pick up the **other half** of the QE peak. . .

- Remember, this is for one 'slice' of the integral
 - ▶ That is, this effect shows up for each E_s bin

Threshold Studies (3)

Integrating From the Elastic Threshold



Summary and What's Next

- Unpolarized Radiative Corrections
 - ▶ Choosing the integration threshold clearly has an effect
 - ▶ Integrating from the **elastic** threshold picks up the rest of the QE peak
- Polarized Radiative Corrections
 - ▶ Getting closer on the C++ POLRAD version
 - ▶ Fortran version still needs work...
- What's next?
 - ▶ Investigate systematics of RADCOR interpolation method (?)
 - ▶ Continue work on POLRAD (C++/Fortran)