

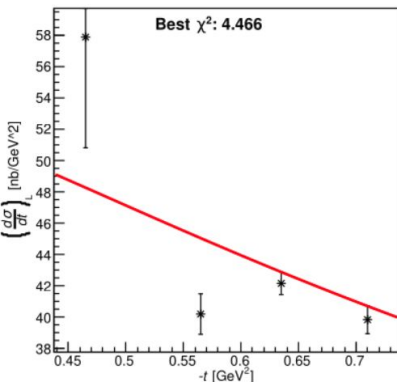
KaonLT Meeting

May 1st, 2025

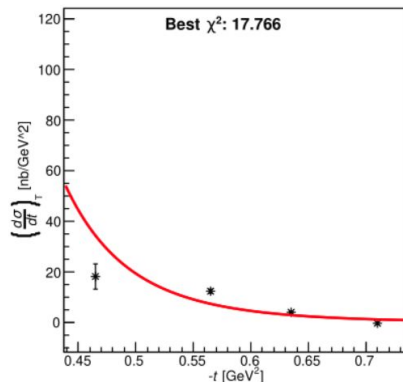
Richard Trotta

$$Q^2=3.0, W=2.32, t=(0.40-0.75), 4t, 15\phi$$

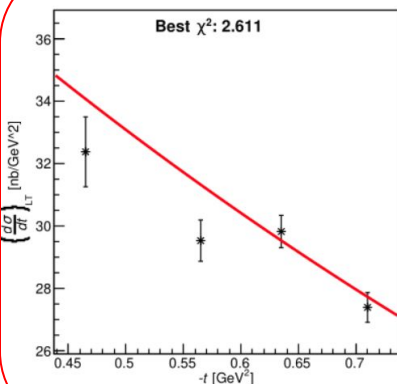
Sigma L Model Fit



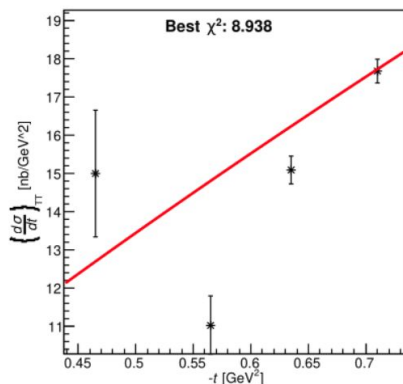
Sigma T Model Fit



Sigma LT Model Fit



Sigma TT Model Fit



$$\sigma_L = (p_1 \cdot f_t) \cdot e^{-p_2|t|}$$

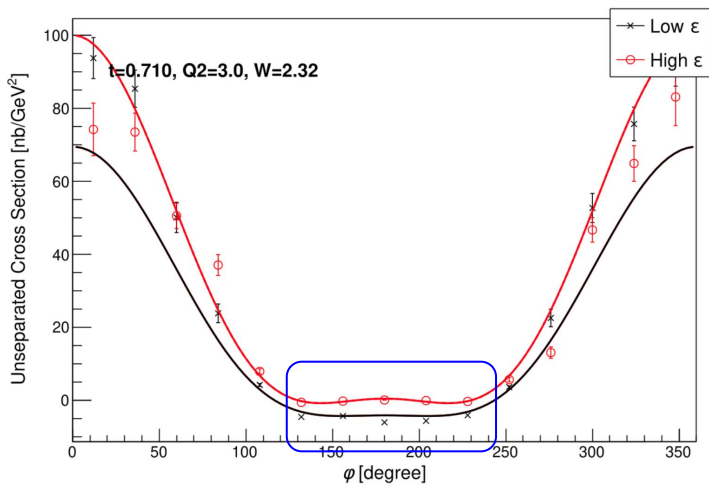
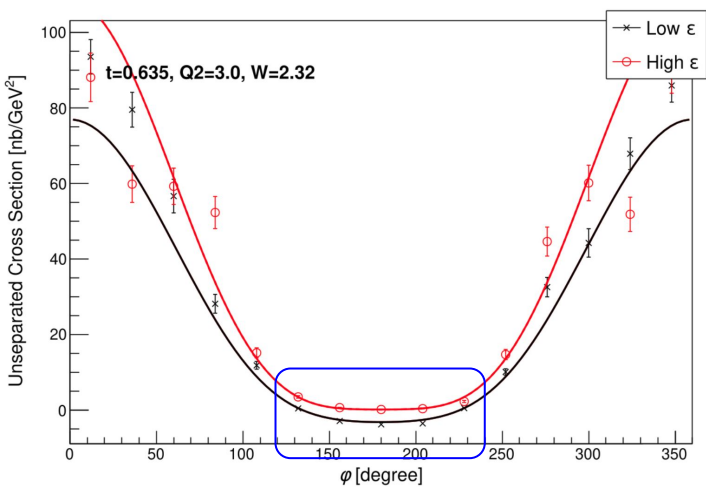
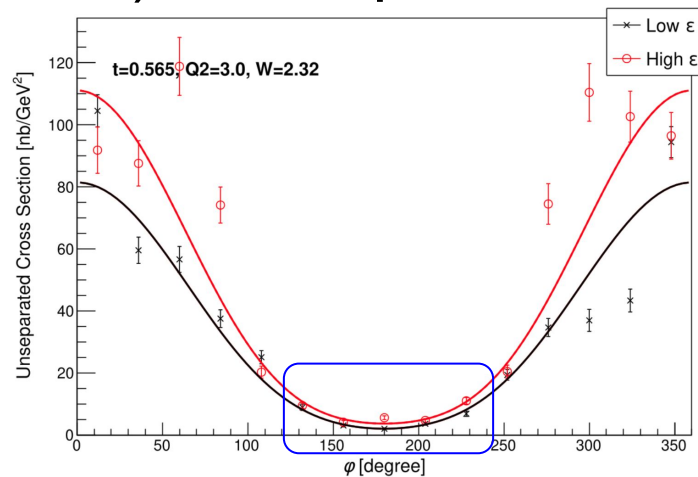
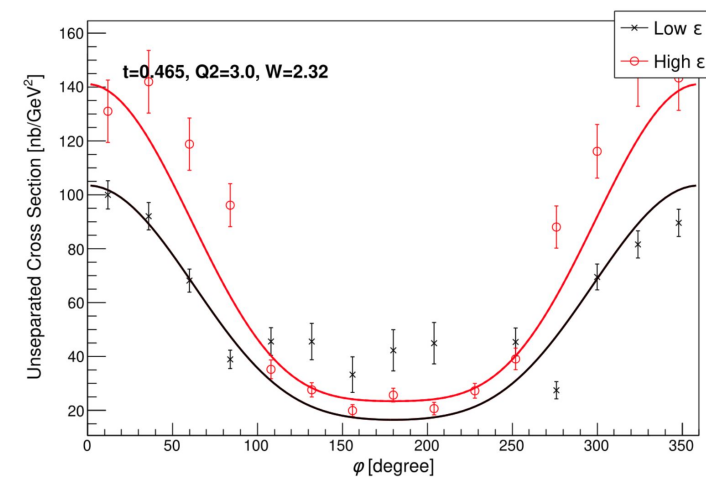
$$\sigma_T = \frac{p_5}{|t|^{p_6}}$$

$$\sigma_{LT} = p_9 \cdot e^{-p_{10}|t|} \sin \theta$$

$$\sigma_{TT} = \frac{p_{13}}{|t|^{p_{14}}} \sin^2 \theta$$

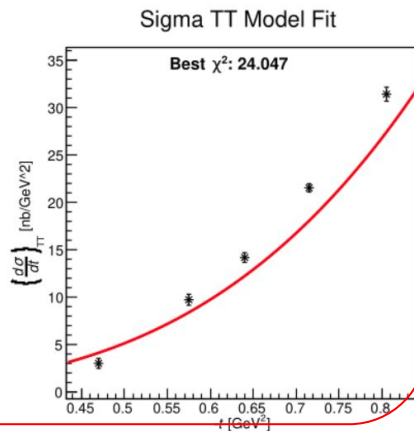
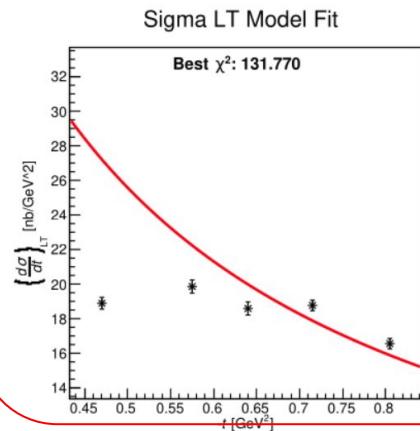
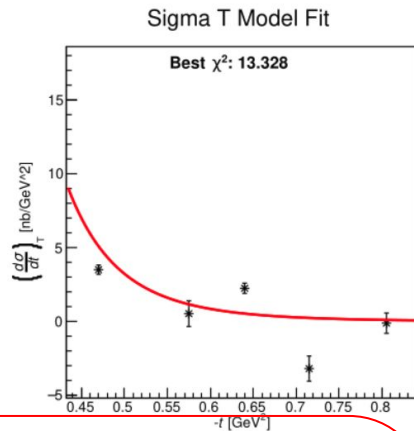
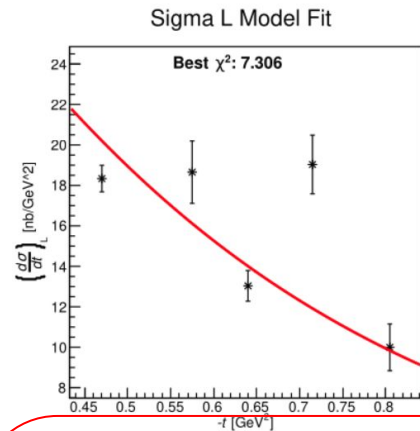
Too large

$$Q^2=3.0, W=2.32, t=(0.40-0.75), 4t, 15\phi$$



$Q^2=4.4$, $W=2.74$, $t=(0.40-0.75)$, $4t$, 12ϕ

Not golden run



$$\sigma_L = (p_1 \cdot f_t) \cdot e^{-p_2|t|}$$

$$\sigma_T = \frac{p_5}{|t|^{p_6}}$$

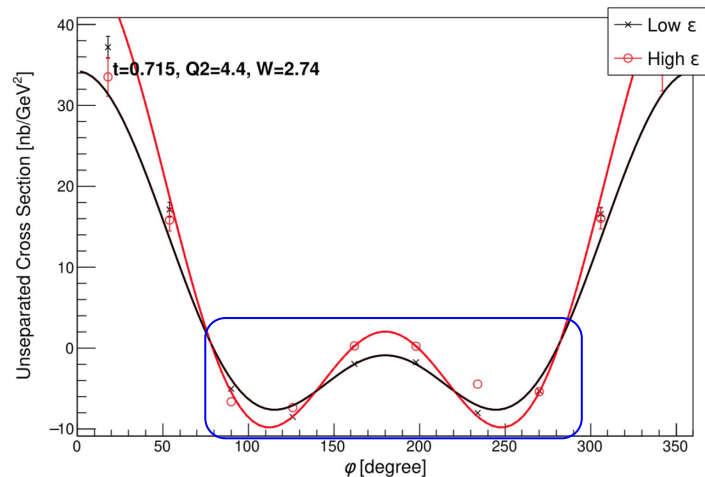
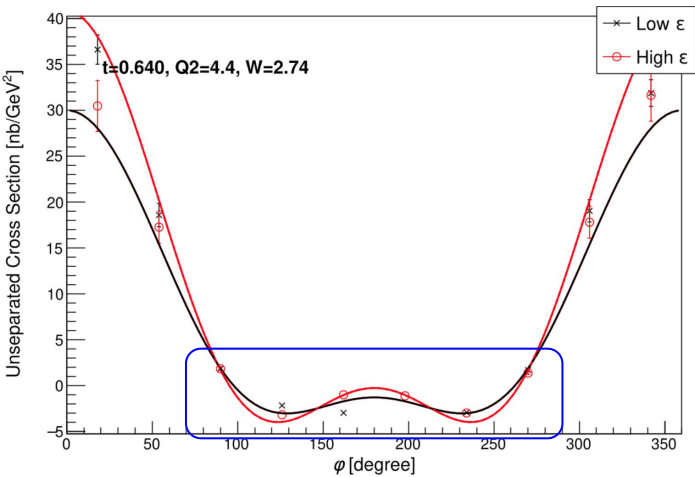
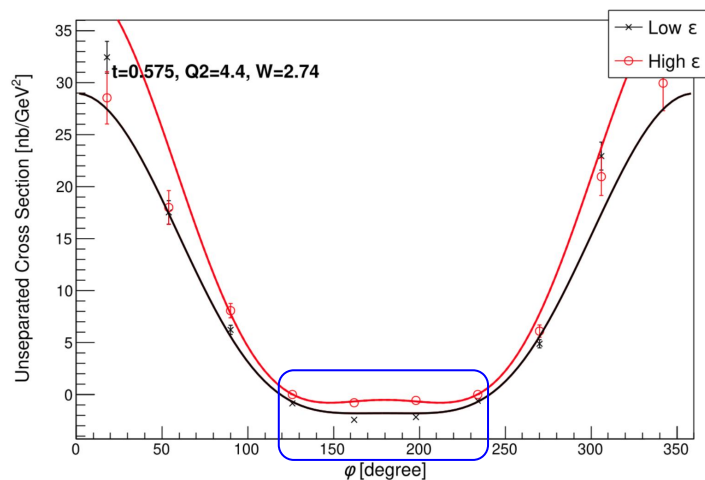
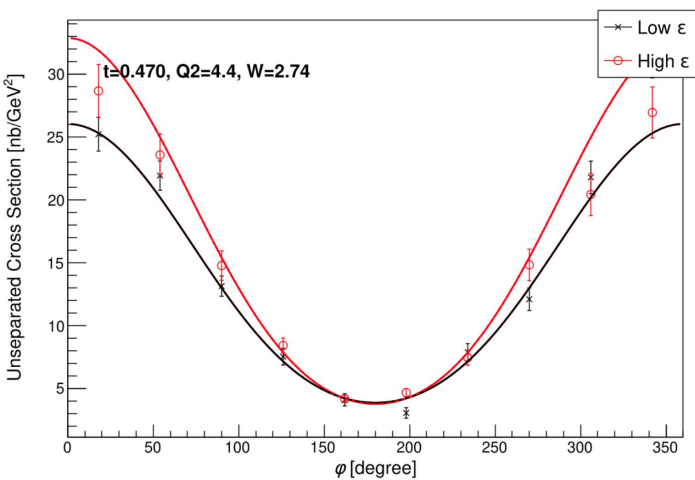
$$\sigma_{LT} = p_9 \cdot e^{-p_{10}|t|} \sin \theta$$

$$\sigma_{TT} = \frac{p_{13}}{|t|^{p_{14}}} \sin^2 \theta$$

Too large

i=10

$$Q^2=4.4, W=2.74, t=(0.40-0.75), 4t, 12\phi$$



Simultaneous unseparated fit procedure

1. Fit L and T, while Fix LT and TT
2. Fit LT, while Fix L, T, and TT
3. Fit L and T, while Fix LT and TT
4. Fit TT, while Fix T, L, and LT
5. Fit T and L, while Fix LT and TT
6. Fit LT and TT, while Fix L and T **[Skipped step]**
7. Fit All

To Do

1. Reanalyze... $Q^2=3.0/W=2.32$ and $Q^2=4.4/W=2.74$
2. Re-parameterize $Q^2=3.0/W=3.14$ with new functional form
3. Parameterize $Q^2=2.115/W=2.95$
4. Full SIMC runs with new functions and parameters for all settings
5. Full Replay for all settings
6. Finalize systematics study

Finish up by end of May