

KaonLT Meeting

June 13th, 2024

Richard Trotta

0th iteration

$$\sigma_L = g(W) \cdot (p_1 + p_2 \log Q^2) e^{(p_3 + p_4 \log Q^2) \cdot |-t|},$$

[5.4]

$$\rightarrow \sigma_L = (p_1 + p_2 \log Q^2) e^{p_3 |-t|}$$

1+ iteration

t-avg for all Q^2

$$\sigma_T = g(W) \cdot [p_5 + p_6 \cdot \log Q^2 + (p_7 + p_8 \cdot \log Q^2) \cdot \frac{|-t| - (0.1112 + 0.0066 \cdot \log Q^2) \cdot Q^2}{(0.1112 + 0.0066 \cdot \log Q^2) \cdot Q^2}],$$

[5.5]

$$\rightarrow \sigma_T = (p_5 (\frac{|-t|}{Q^2} - 1)) e^{p_6 |-t|}$$

Separated Response Functions in
Exclusive, Forward π^\pm Electroproduction on Deuterium
[arXiv:1412.5140v1](https://arxiv.org/abs/1412.5140v1) [nucl-ex] 16 Dec 2014

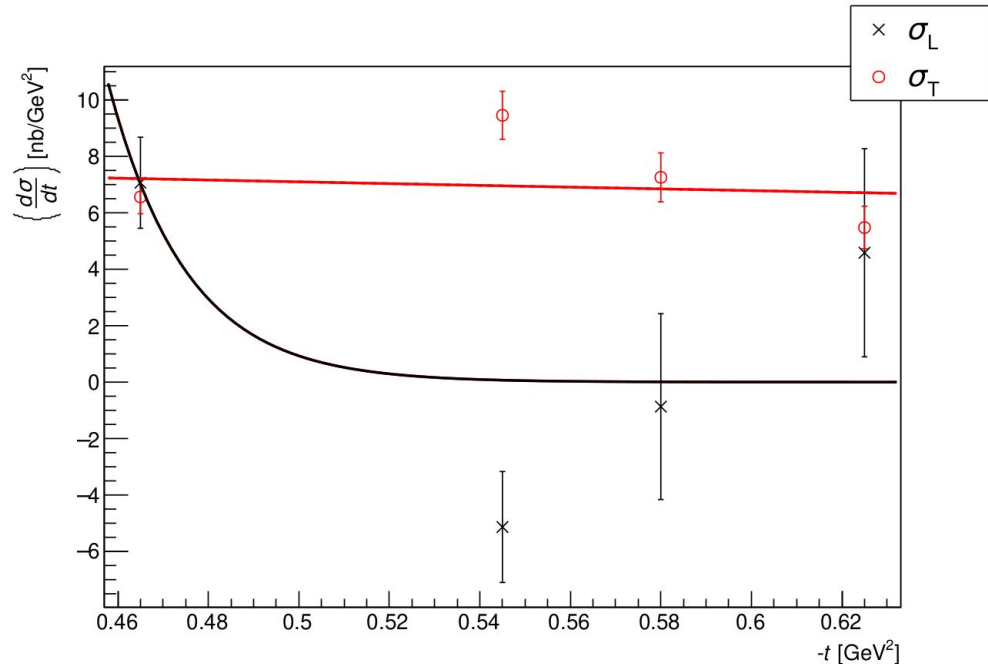
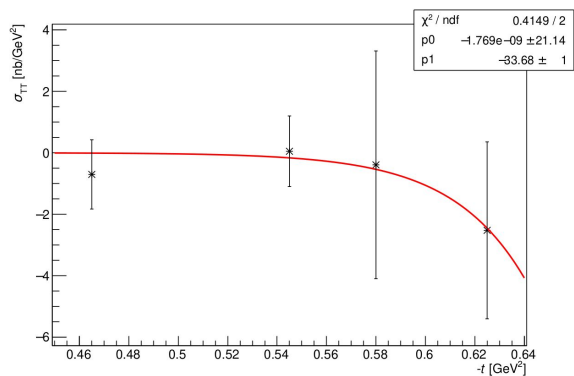
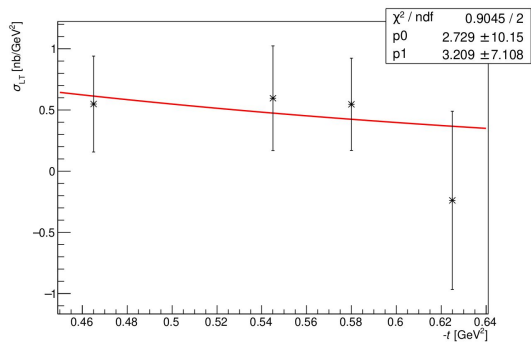
$$\sigma_{LT} = g(W) \cdot (p_9 e^{p_{10} \cdot |-t|} + \frac{p_{11}}{|-t|}) \cdot \sin \theta_{CM}. \quad [5.6]$$

$$\sigma_{TT} = g(W) \cdot (f(t) \cdot \frac{p_{12}}{Q^2} e^{-Q^2}) \cdot \sin^2 \theta_{CM}, \quad [5.7]$$

$Q^2=5.5, W=3.02$

$t=0.4-0.65$

*****0 iterations**



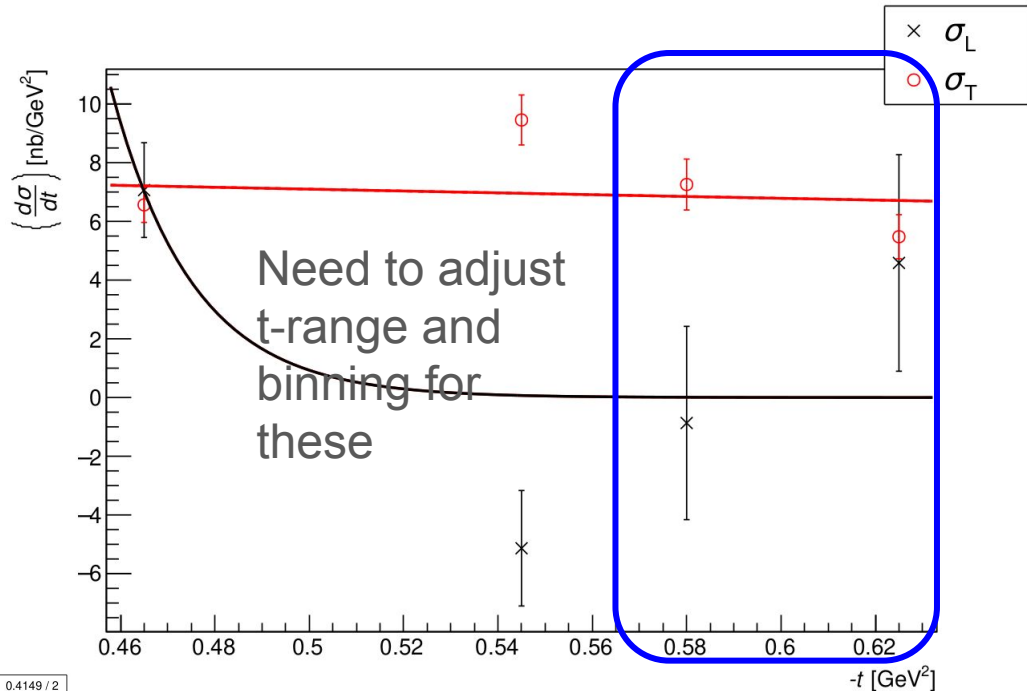
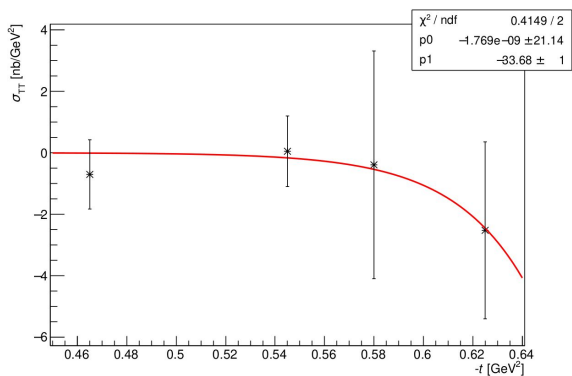
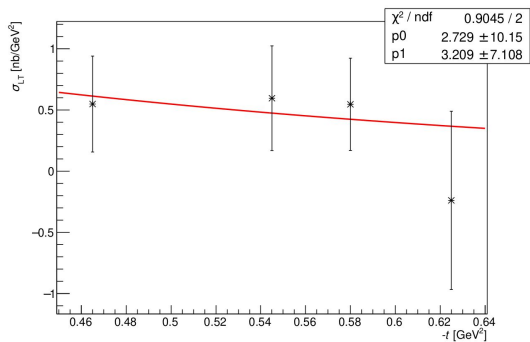
$$\sigma_L = g(W) \cdot (p1 + p2 \log Q^2) e^{(p3 + p4 \log Q^2) \cdot | -t |}, \quad [5.4]$$

$$\sigma_T = g(W) \cdot [p5 + p6 \cdot \log Q^2 + (p7 + p8 \cdot \log Q^2) \cdot \frac{| -t | - (0.1112 + 0.0066 \cdot \log Q^2) \cdot Q^2}{(0.1112 + 0.0066 \cdot \log Q^2) \cdot Q^2}], \quad [5.5]$$

$Q^2=5.5, W=3.02$

$t=0.4-0.65$

***0 iterations



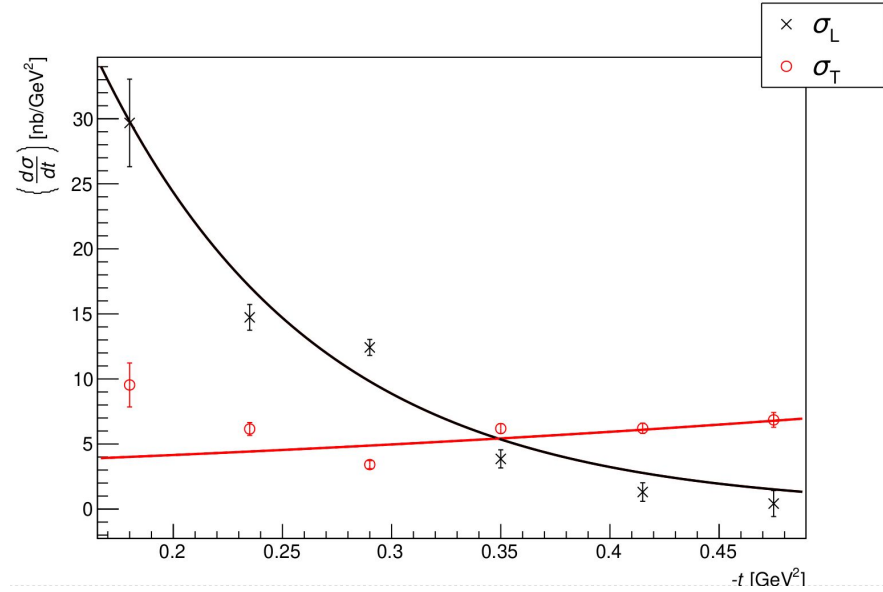
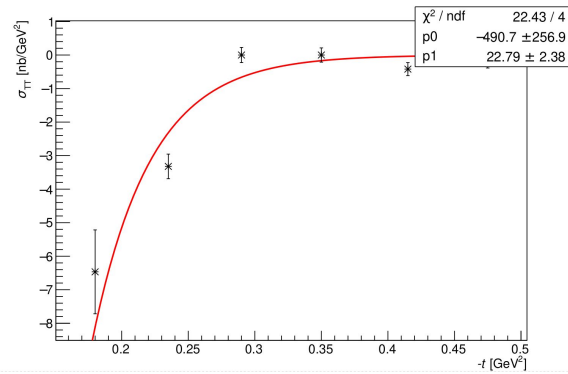
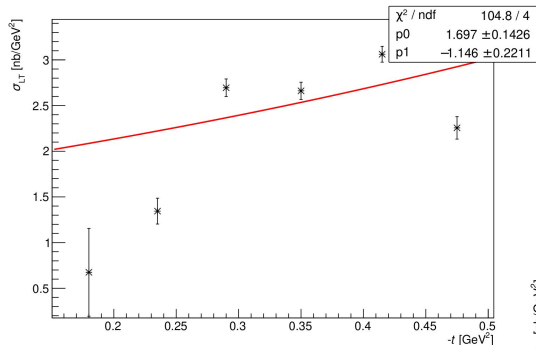
$$\sigma_L = g(W) \cdot (p1 + p2 \log Q^2) e^{(p3+p4 \log Q^2) \cdot | -t |}, \quad [5.4]$$

$$\sigma_T = g(W) \cdot [p5 + p6 \cdot \log Q^2 + (p7 + p8 \cdot \log Q^2) \cdot \frac{| -t | - (0.1112 + 0.0066 \cdot \log Q^2) \cdot Q^2}{(0.1112 + 0.0066 \cdot \log Q^2) \cdot Q^2}], \quad [5.5]$$

$Q^2=3.0, W=3.14$

$t=0.15-0.5$

***1 iterations



$$\sigma_L = (p_1 + p_2 \log Q^2) e^{p_3 | -t |}$$

$$\sigma_T = \left(p_5 \left(\frac{| -t |}{Q^2} - 1 \right) \right) e^{p_6 | -t |}$$