

KaonLT Meeting

October 10th, 2024

Richard Trotta

$$\frac{1}{(W^2 - M_p^2)^n}$$

$$n=3.40 \mid Q^2=3.0, W=2.32$$

$$n=2.65 \mid Q^2=4.4, W=2.74$$

$$n=2.45 \mid Q^2=2.115, W=2.95$$

$$n=2.45 \mid Q^2=5.5, W=3.02$$

$$n=2.25 \mid Q^2=3.0, W=3.14$$

↓
Increasing W

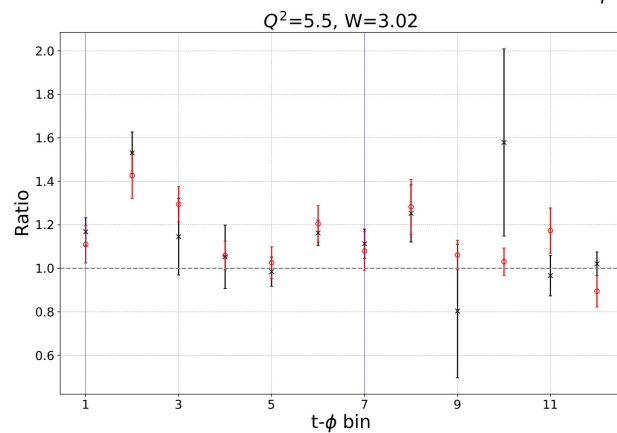
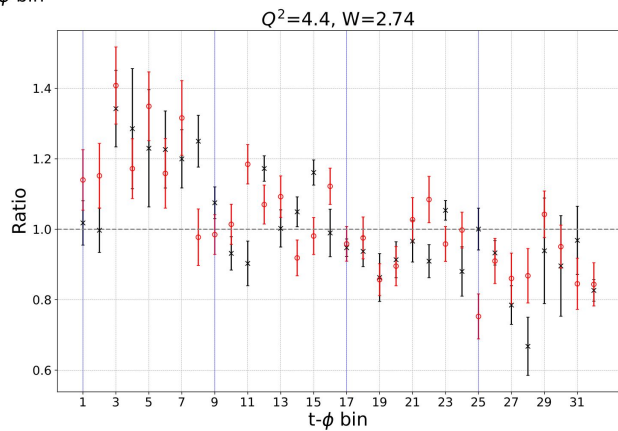
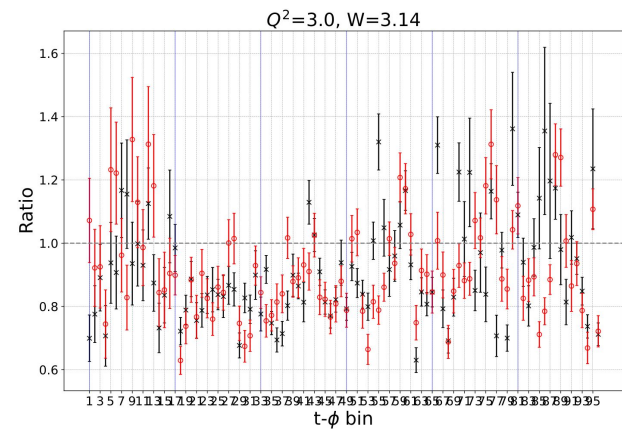
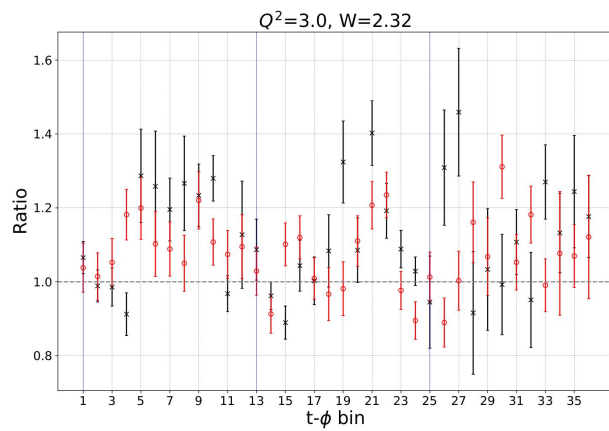
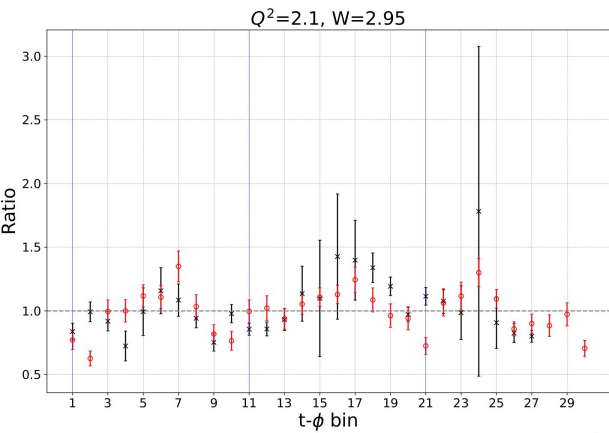
$$\sigma_L = (p_1 \cdot Q_{dep,L} \cdot f_t) \cdot e^{-p_2|t|}$$

$$\sigma_T = (p_5 e^{-p_6|t|} + p_7 \cdot |t|) \cdot Q_{dep,T}^{p_8}$$

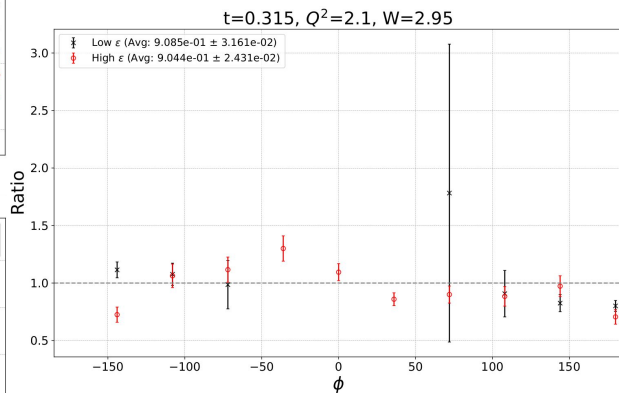
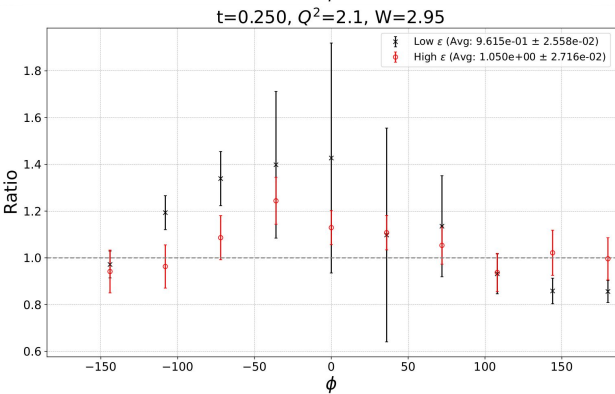
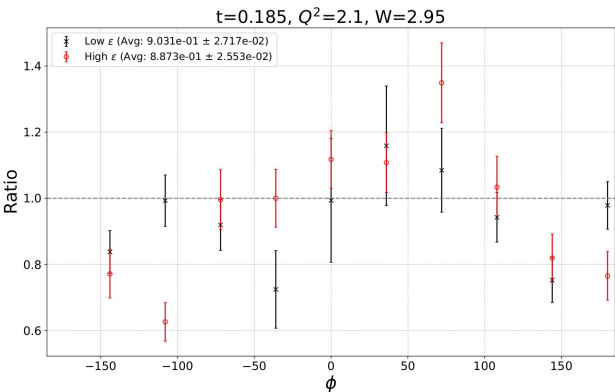
$$\sigma_{LT} = (p_9 \cdot e^{p_{10}|t|} + \frac{p_{11}}{|t|}) \cdot \sin \theta$$

$$\sigma_{TT} = (-p_{13}|t| + p_{14}) \cdot |t|^{\frac{Q^2}{p_{15}}} - p_{16} \cdot Q^2$$

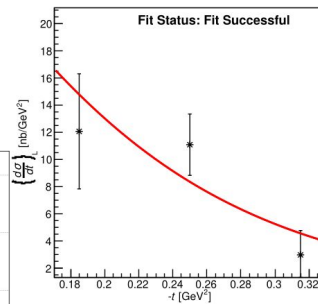
$$\sigma_{TT} = (p_{13} \cdot Q^2 \cdot e^{-Q^2}) \cdot f_t \cdot \sin^2 \theta$$



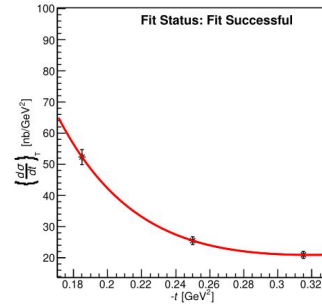
$Q^2=2.115$, $W=2.95$, $t=(0.15-0.35)$, $3t$, 10φ



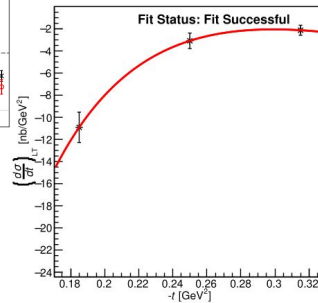
Sigma L Model Fit



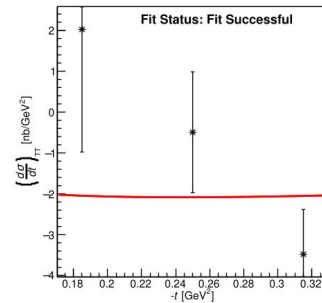
Sigma T Model Fit



Sigma LT Model Fit



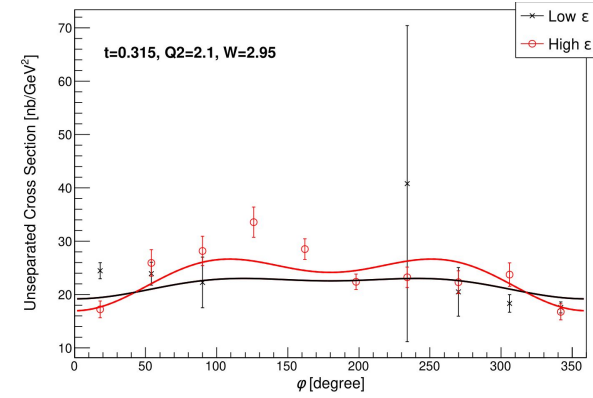
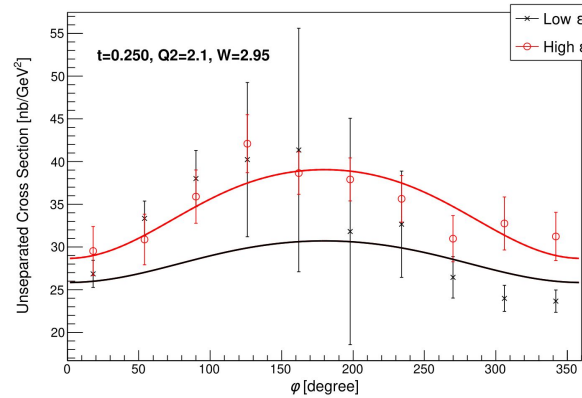
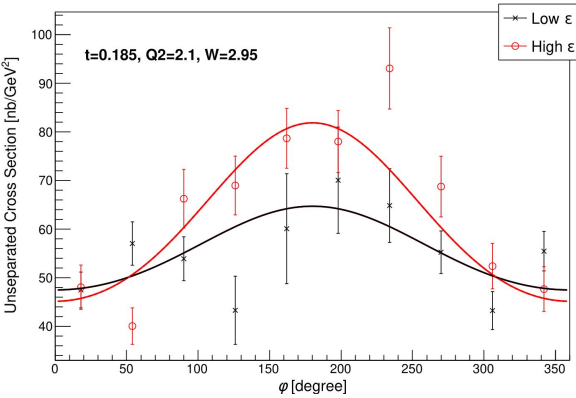
Sigma TT Model Fit



$i=5$

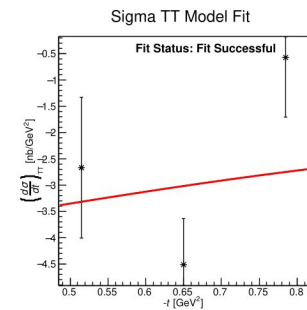
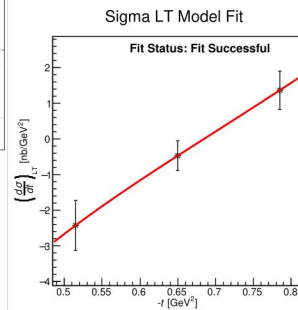
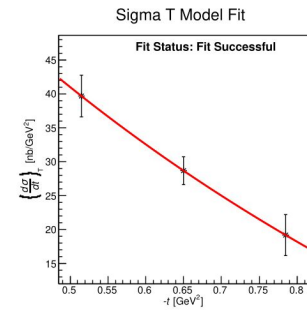
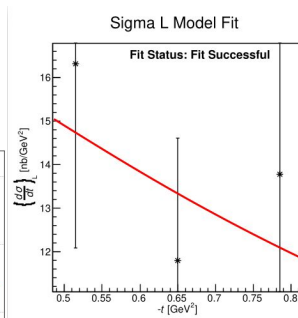
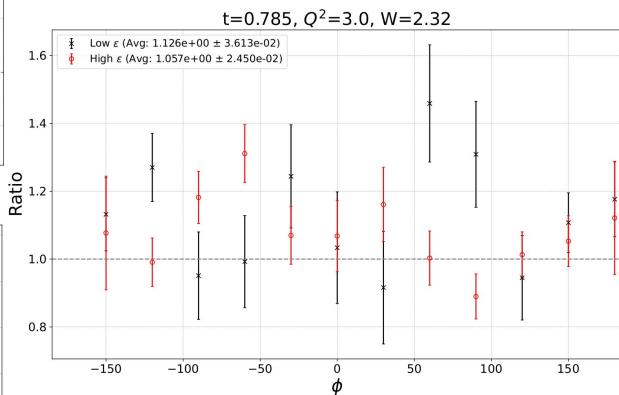
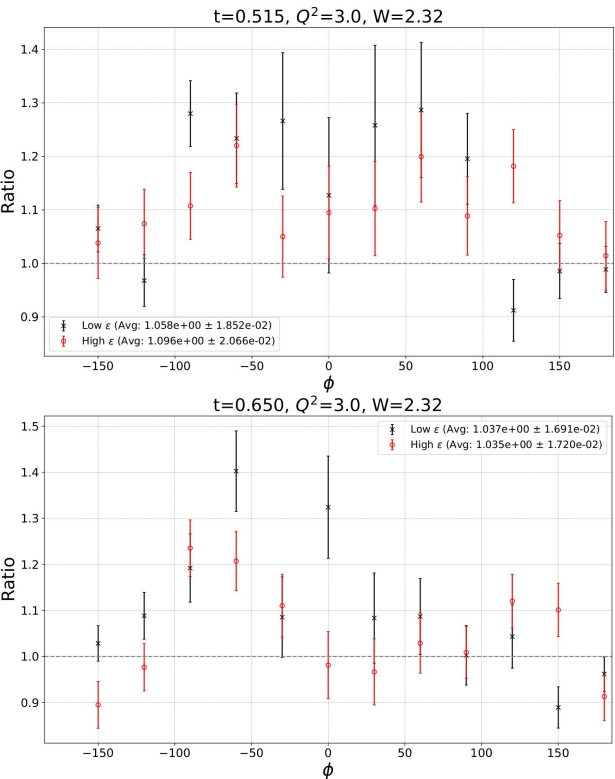
$$\sigma_{TT} = (p_{13} \cdot Q^2 \cdot e^{-Q^2}) \cdot f_t \cdot \sin^2 \theta$$

$$Q^2=2.115, W=2.95, t=(0.15-0.35), 3t, 10\varphi$$



σ_{low}	$d\sigma_{\text{low}}$	σ_{high}	$d\sigma_{\text{high}}$	t
55.596	1.708	61.920	1.799	0.1850
28.415	0.822	34.295	0.981	0.2500
21.746	0.789	23.312	0.664	0.3150

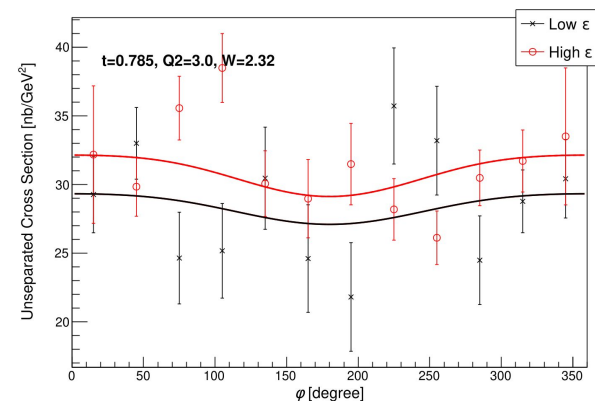
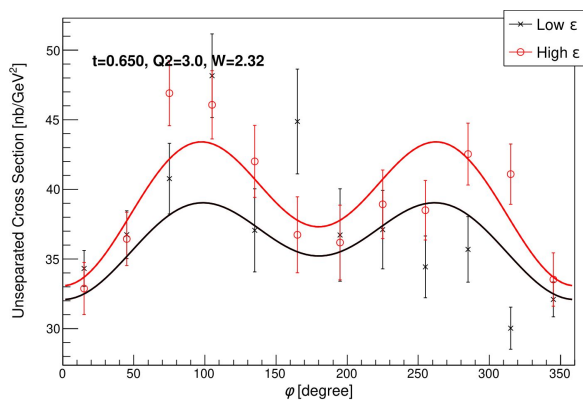
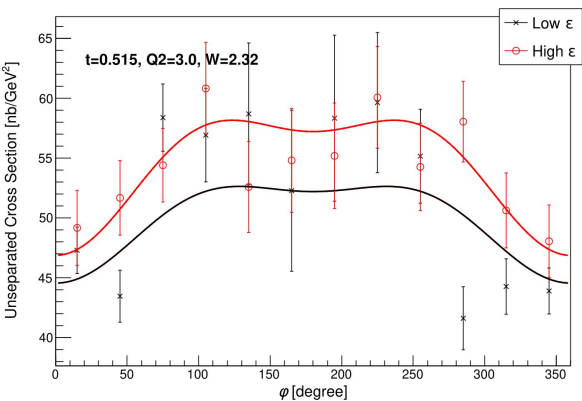
$Q^2=3.0$, $W=2.32$, $t=(0.45-0.85)$, $3t$, 12ϕ



$i=5$

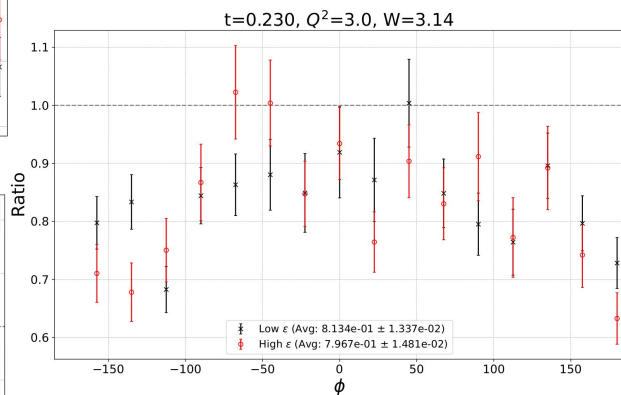
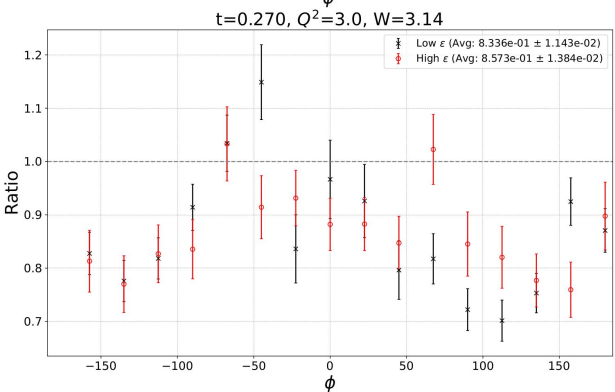
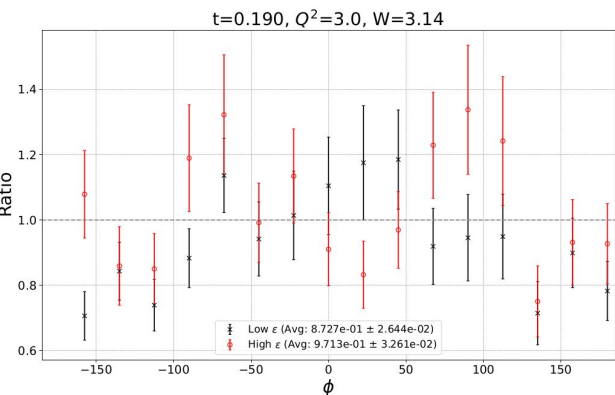
$$\sigma_{TT} = (p_{13} \cdot Q^2 \cdot e^{-Q^2}) \cdot f_t \cdot \sin^2 \theta$$

$Q^2=3.0, W=2.32, t=(0.15-0.35), 3t, 10\varphi$



σ_{low}	$d\sigma_{\text{low}}$	σ_{high}	$d\sigma_{\text{high}}$	t
49.909	1.020	54.391	1.158	0.5150
36.288	0.709	39.235	0.764	0.6500
28.382	0.975	30.895	0.794	0.7850

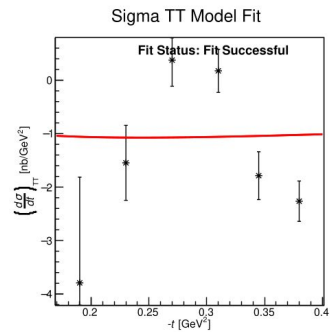
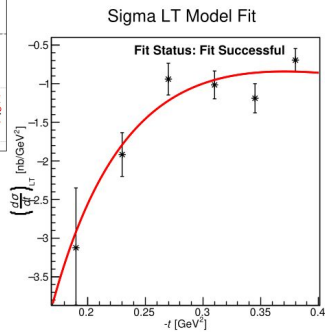
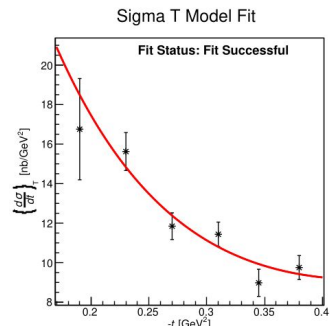
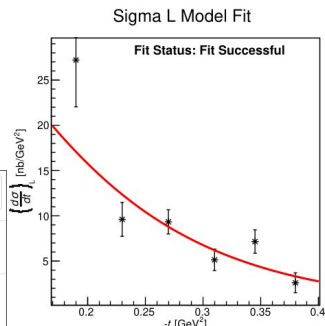
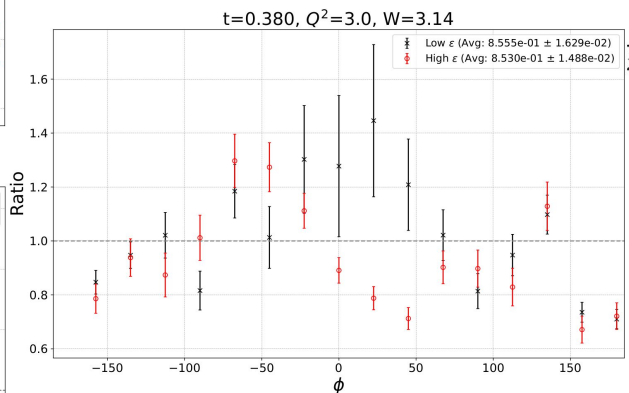
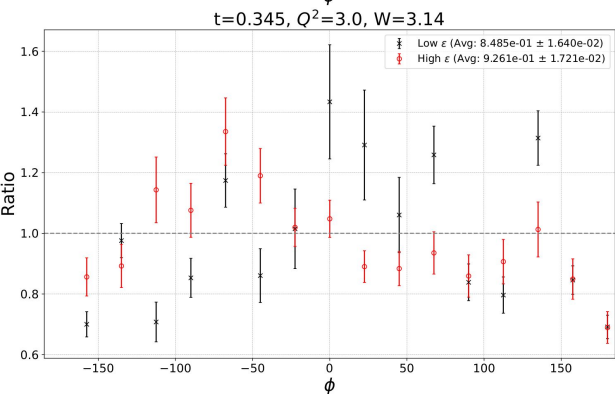
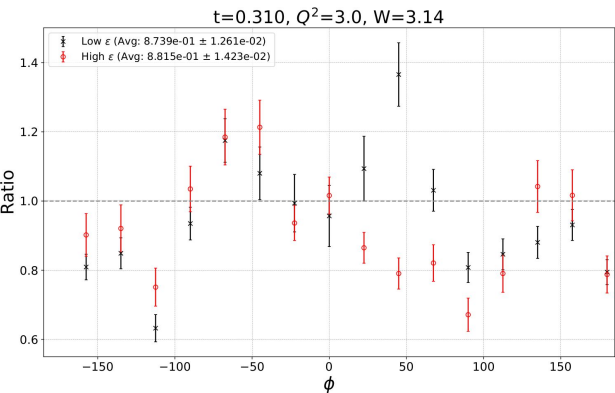
$Q^2=3.0, W=3.14, t=(0.17-0.40), 6t, 16\varphi$



$i=5$

$$\sigma_{TT} = (p_{13} \cdot Q^2 \cdot e^{-Q^2}) \cdot f_t \cdot \sin^2 \theta$$

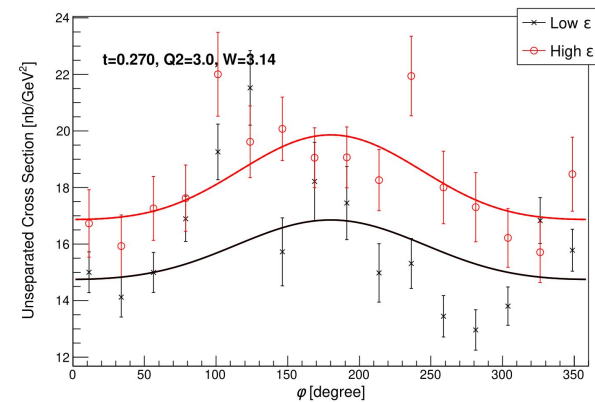
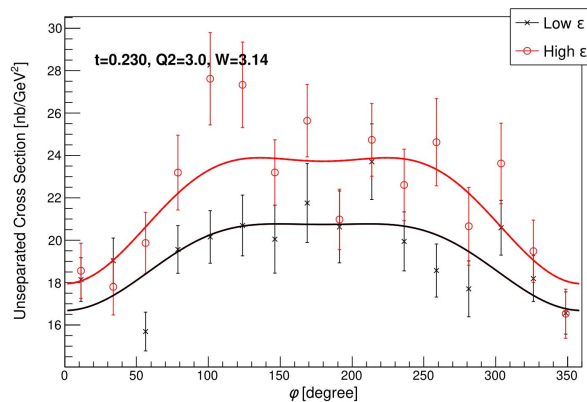
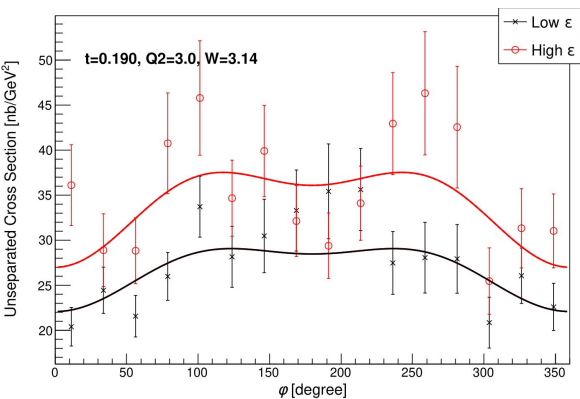
$Q^2=3.0$, $W=3.14$, $t=(0.17-0.40)$, $6t$, 16ϕ



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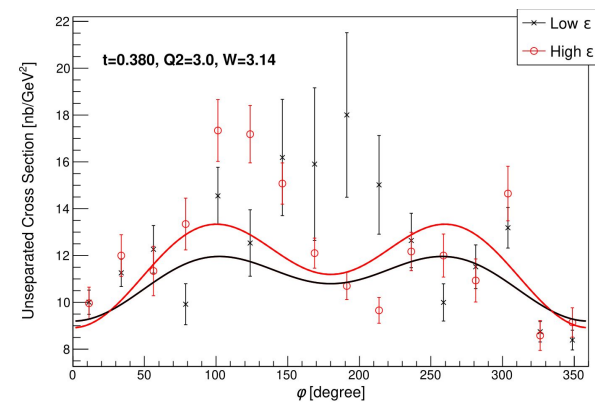
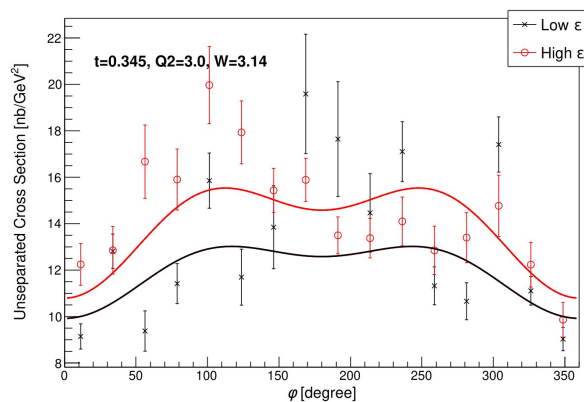
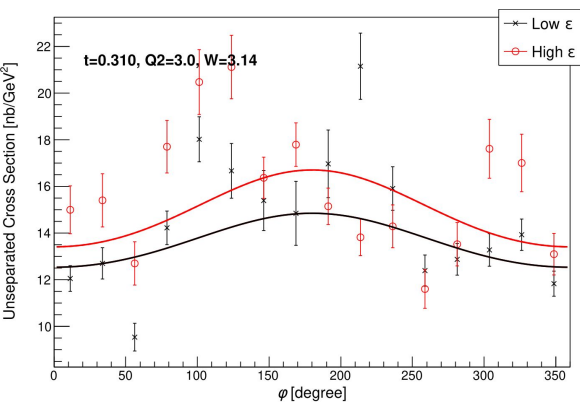
$$\sigma_{TT} = (p_{13} \cdot Q^2 \cdot e^{-Q^2}) \cdot f_t \cdot \sin^2 \theta$$

$Q^2=3.0$, $W=3.14$, $t=(0.17-0.40)$, $6t$, 16φ



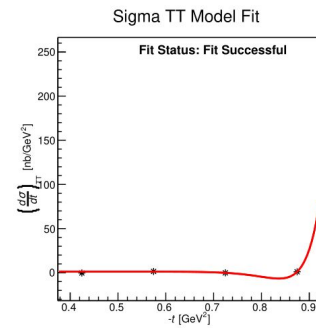
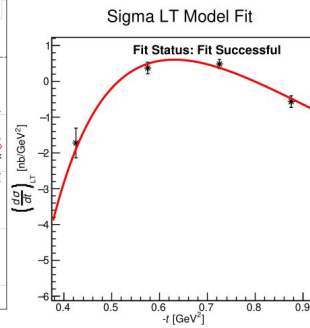
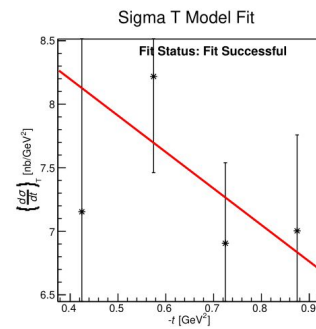
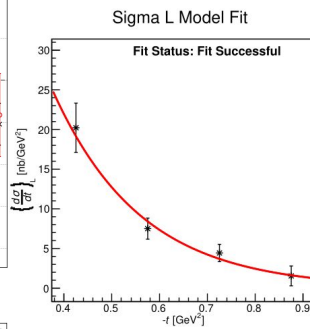
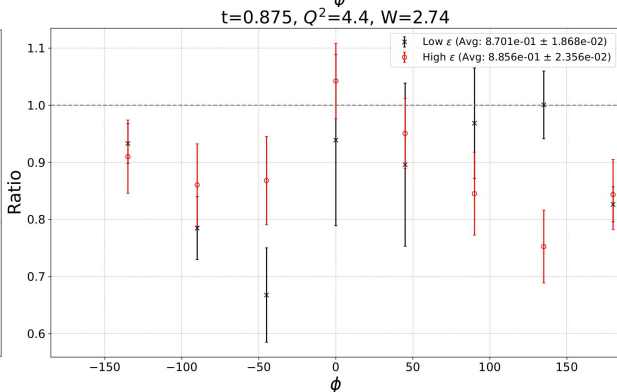
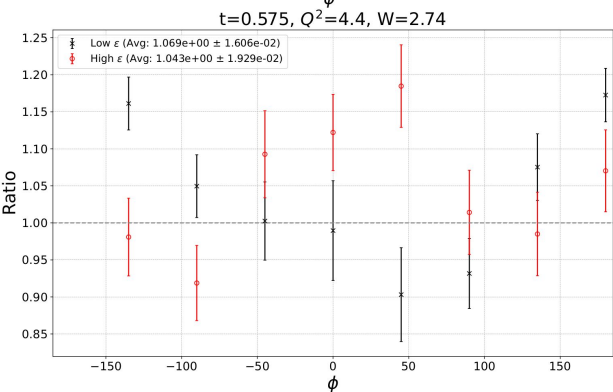
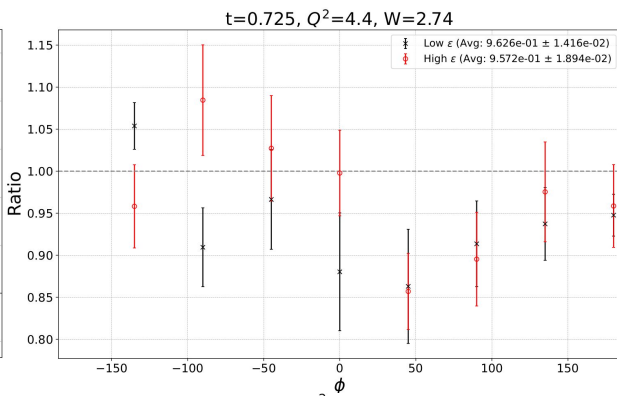
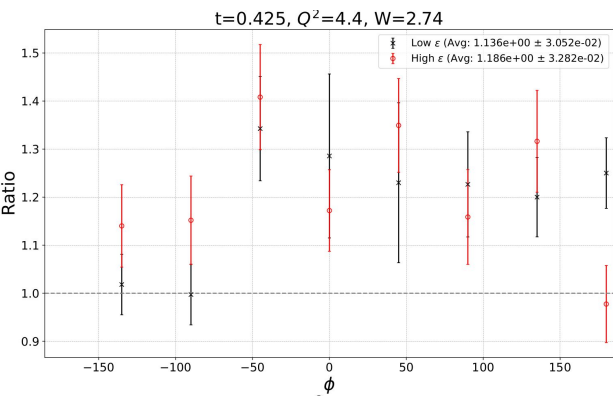
σ_{low}	$d\sigma_{\text{low}}$	σ_{high}	$d\sigma_{\text{high}}$	t
26.732	0.813	34.012	1.163	0.1900
19.308	0.356	21.845	0.442	0.2300
15.644	0.256	18.098	0.336	0.2700

$Q^2=3.0$, $W=3.14$, $t=(0.17-0.40)$, $6t$, 16φ



σ_{low}	$d\sigma_{\text{low}}$	σ_{high}	$d\sigma_{\text{high}}$	t
13.634	0.230	14.959	0.282	0.3100
11.985	0.248	13.931	0.285	0.3450
10.936	0.229	11.646	0.224	0.224

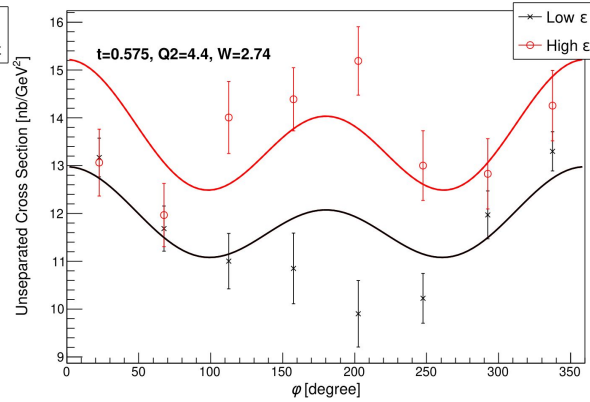
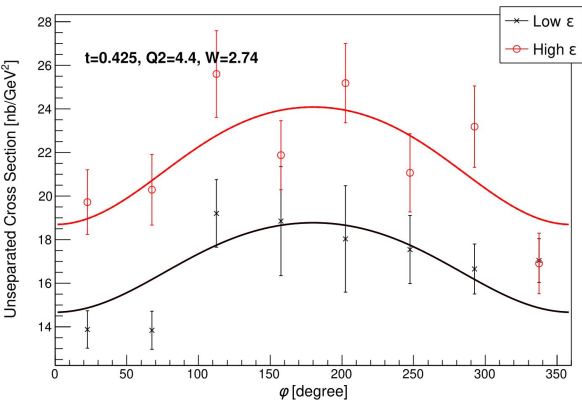
$Q^2=4.4$, $W=2.74$, $t=(0.35-0.95)$, $4t$, 8φ



$i=5$

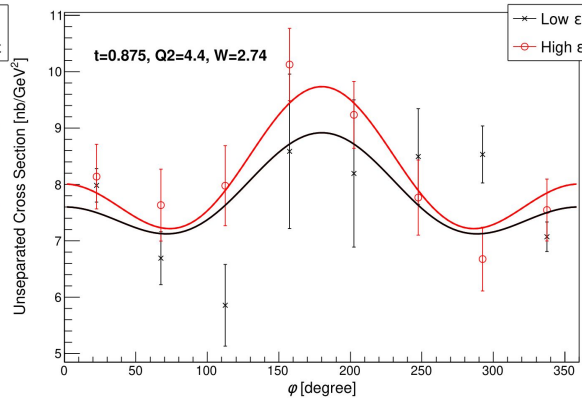
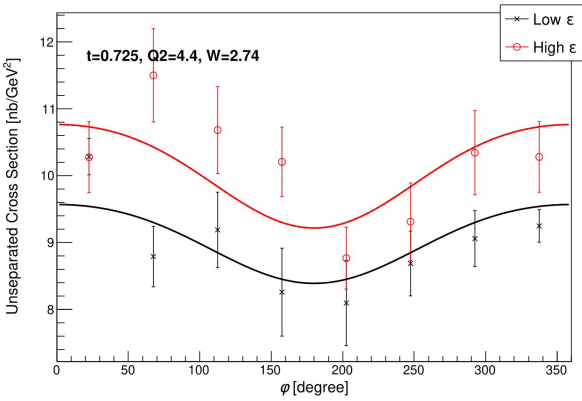
$$\sigma_{TT} = (-p_{13}|t| + p_{14}) \cdot |t| \frac{Q^2}{p_{15}} - p_{16} \cdot Q^2$$

$$Q^2=4.4, W=2.74, t=(0.35-0.95), 4t, 8\varphi$$



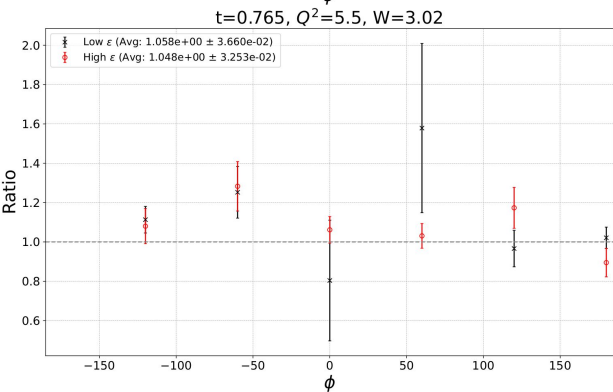
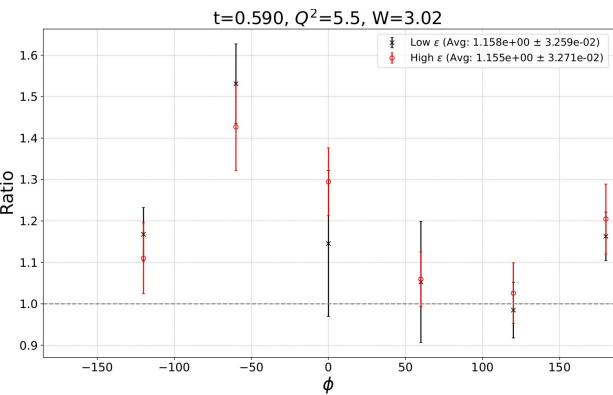
σ_{low}	$d\sigma_{\text{low}}$	σ_{high}	$d\sigma_{\text{high}}$	t
16.861	0.481	21.597	0.646	0.4250
11.821	0.239	13.578	0.305	0.5750

$$Q^2=4.4, W=2.74, t=(0.35-0.95), 4t, 8\varphi$$

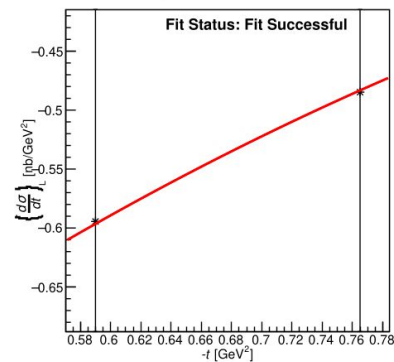


σ_{low}	$d\sigma_{\text{low}}$	σ_{high}	$d\sigma_{\text{high}}$	t
9.035	0.193	10.074	0.237	0.7250
7.744	0.205	8.105	0.240	0.8750

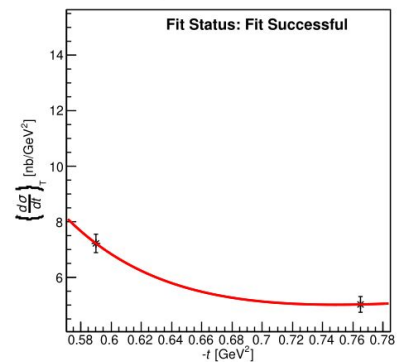
$Q^2=5.5$, $W=3.02$, $t=(0.50-0.85)$, $2t$, 6φ



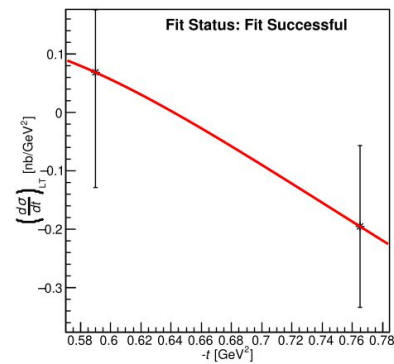
Sigma L Model Fit



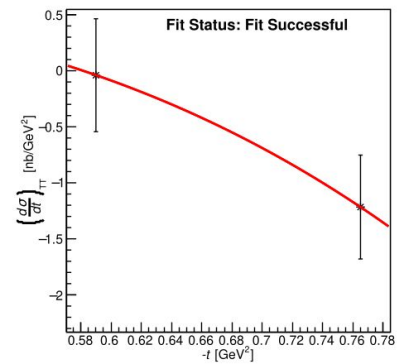
Sigma T Model Fit



Sigma LT Model Fit



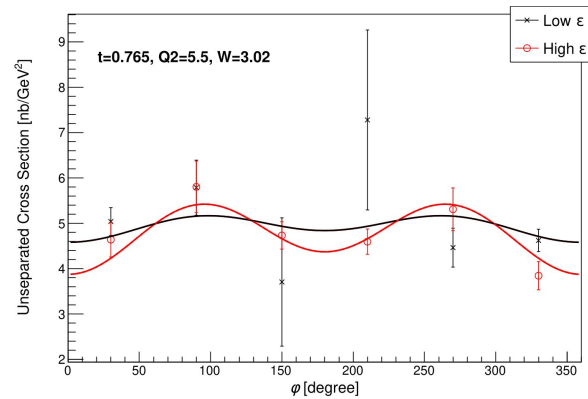
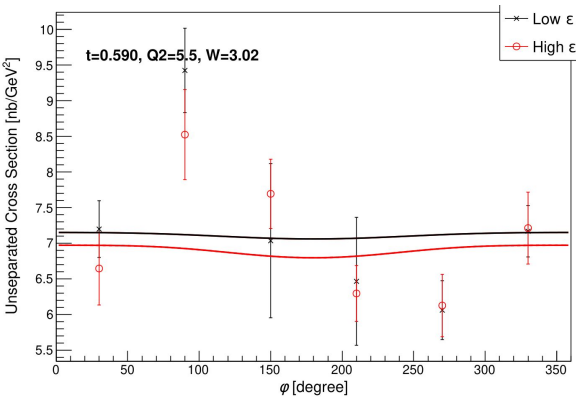
Sigma TT Model Fit



$i=5$

$$\sigma_{TT} = (-p_{13}|t| + p_{14}) \cdot |t| \frac{Q^2}{p_{15}} - p_{16} \cdot Q^2$$

$$Q^2=5.5, W=3.02, t=(0.50-0.85), 2t, 6\varphi$$



σ_{low}	$d\sigma_{\text{low}}$	σ_{high}	$d\sigma_{\text{high}}$	t
7.113	0.234	6.905	0.221	0.5900
4.934	0.192	4.766	0.161	0.7650