KaonLT Meeting

July 31st, 2024

Richard Trotta

Previous functional forms…

$$\sigma_L = p_1 \cdot Q_{F,L} \cdot t_{pole} \cdot e^{-p_6|-t|}$$

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

$$\sigma_{LT} = \frac{p_9}{1 + Q^2} \cdot e^{-p_{10}|-t|} \cdot \sin \theta_K$$
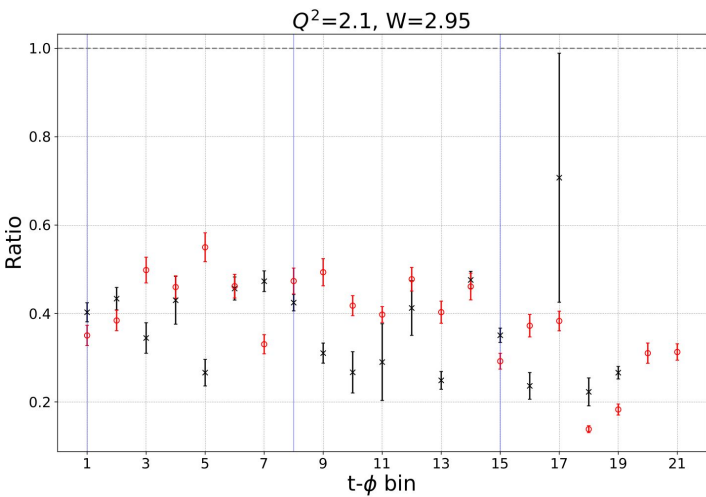
$$\sigma_{TT} = \frac{p_{13}}{(1 + Q^2)} \cdot t_{pole} \cdot e^{-p_{14}Q^2} \cdot \sin^2 \theta_K$$

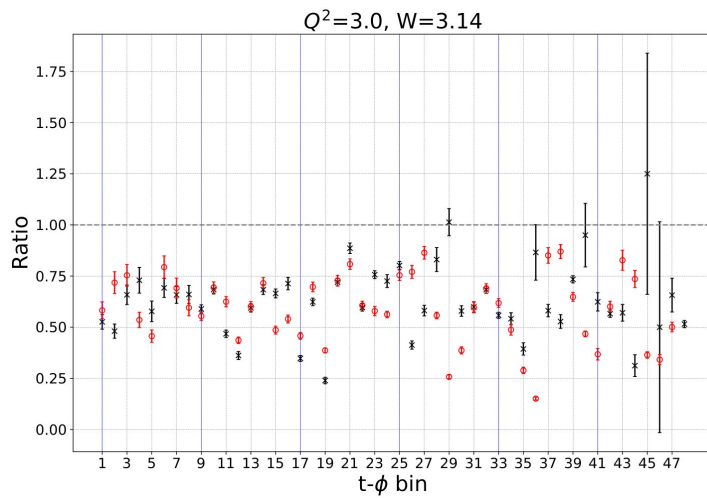$$Q_{F,L} = \frac{Q^2}{1 + 1.77Q^2 + 0.12(Q^2)^2}$$

$$t_{pole} = \frac{|-t|}{(|-t| + m_K^2)^2}$$

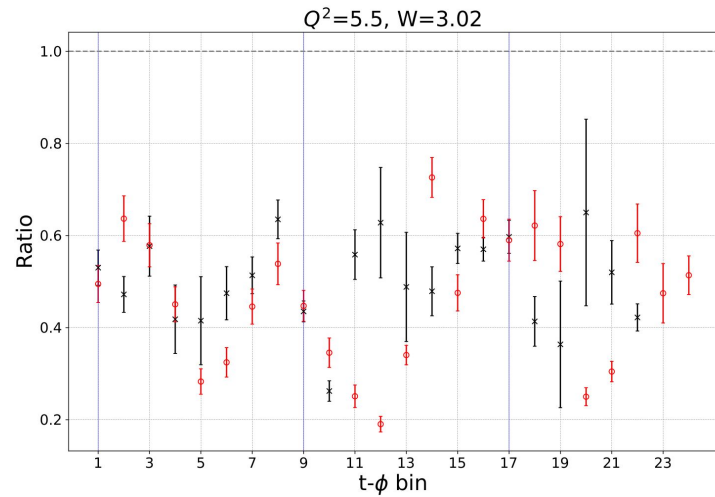$$Q_{F,T} = \frac{e^{-(Q^2)^2}}{Q^2}$$

Newer functional forms…

$$\sigma_L = p_1 \cdot Q_{F,L} \cdot t_{pole} \cdot e^{-p_6|-t|}$$

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

$$\sigma_{LT} = \frac{p_9}{1 + Q^2} \cdot e^{-p_{10}|-t|} \cdot \sin \theta_K$$

$$\sigma_{TT} = \frac{p_{13}}{(1 + Q^2)} \cdot t_{pole} \cdot e^{-p_{14}Q^2} \cdot \sin^2 \theta_K$$

$$Q_{F,L} = \frac{Q^2}{1 + 1.77Q^2 + 0.12(Q^2)^2}$$

$$t_{pole} = \frac{|-t|}{(|-t| + m_K^2)^2}$$

$$Q_{F,T} = \frac{e^{-(Q^2)^2}}{Q^2}$$

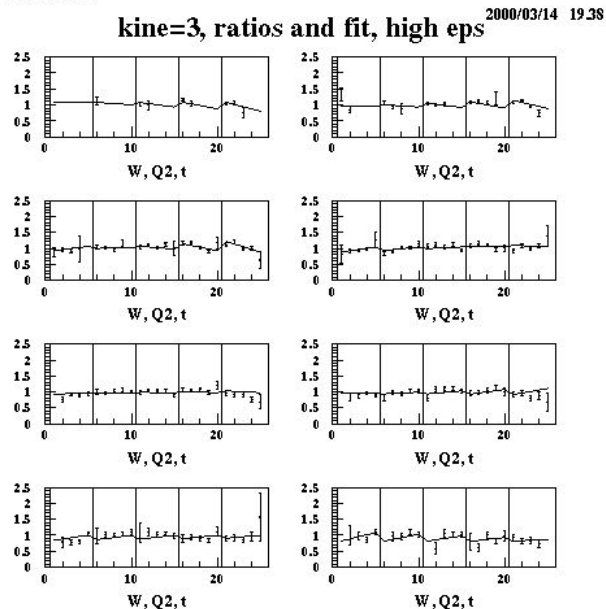# Q^2=2.115, W=2.95 Q^2=3.0, W=3.14 Q^2=5.5, W=3.02

****i=1

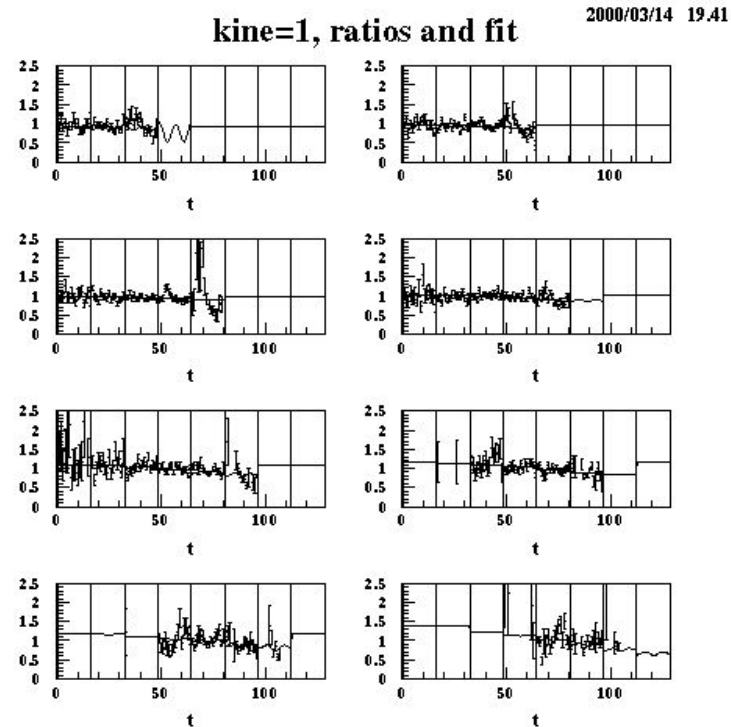User name J. Volmer

Entry number 364

$$a + b \cdot (W - W_c) + c \cdot (Q^2 - Q_c^2) + d \cdot (W - W_c) \cdot (Q^2 - Q_c^2)$$

FIGURE 1

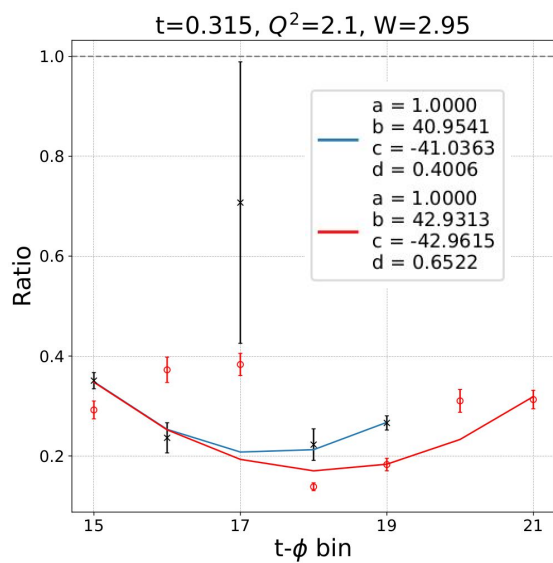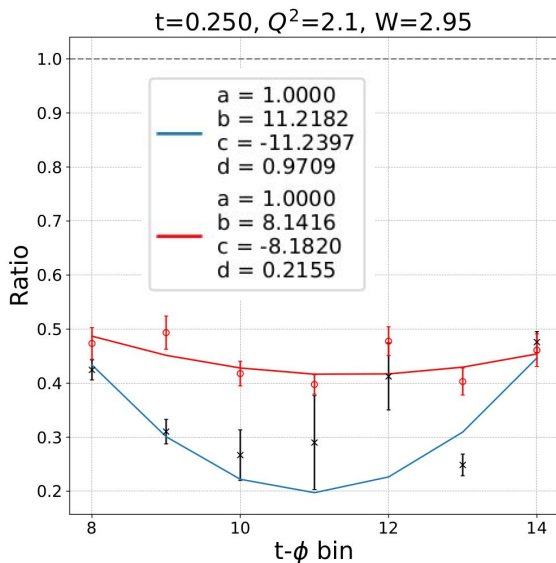kine=3, ratios and fit, high eps 2000/03/14 19.38

$$a + b \cdot \sin^2 \theta + c \cdot \sin \theta \cos \phi + d \cdot \sin^2 \theta \cos 2\phi$$

FIGURE 1

kine=1, ratios and fit 2000/03/14 19.41

Q²=2.115, W=2.95

$$a + b \cdot (W - W_c) + c \cdot (Q^2 - Q_c^2) + d \cdot (W - W_c) \cdot (Q^2 - Q_c^2)$$
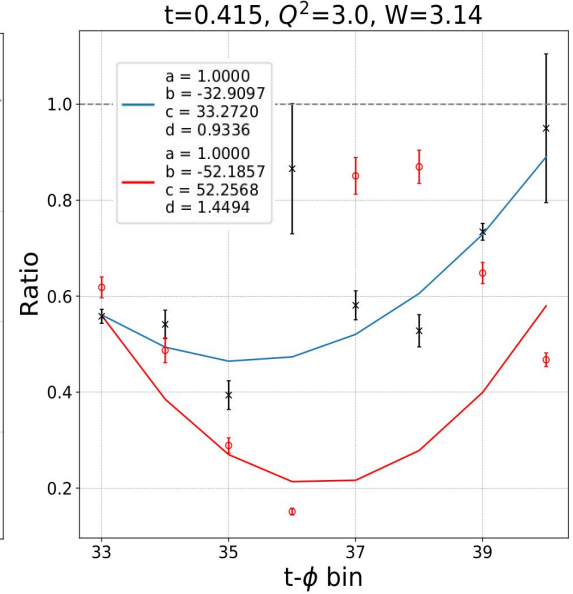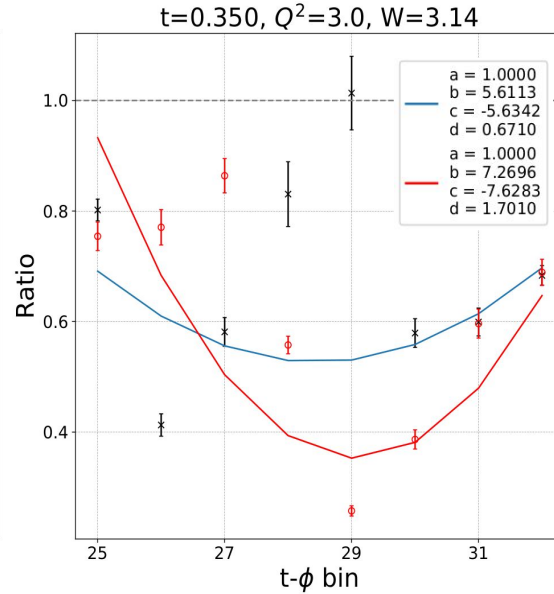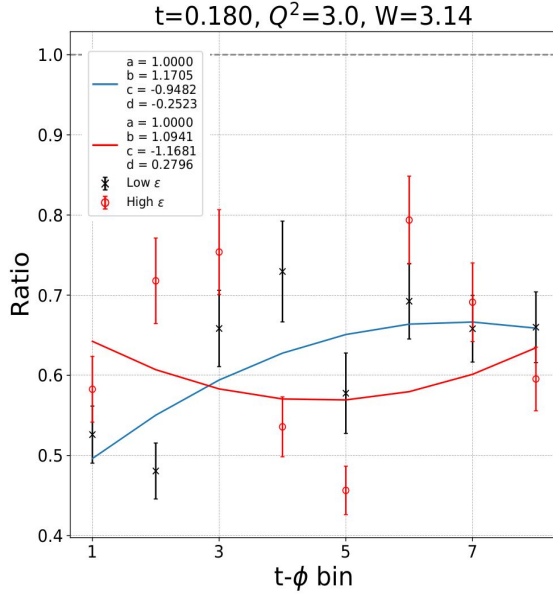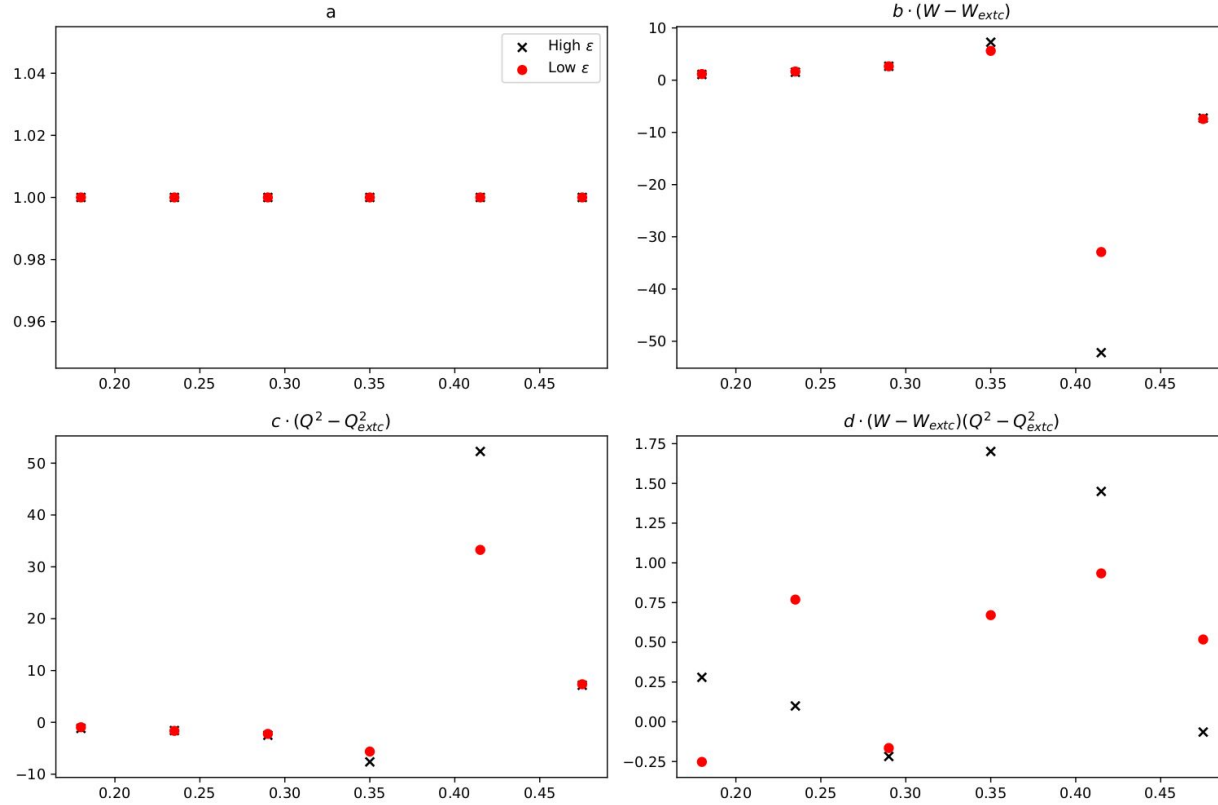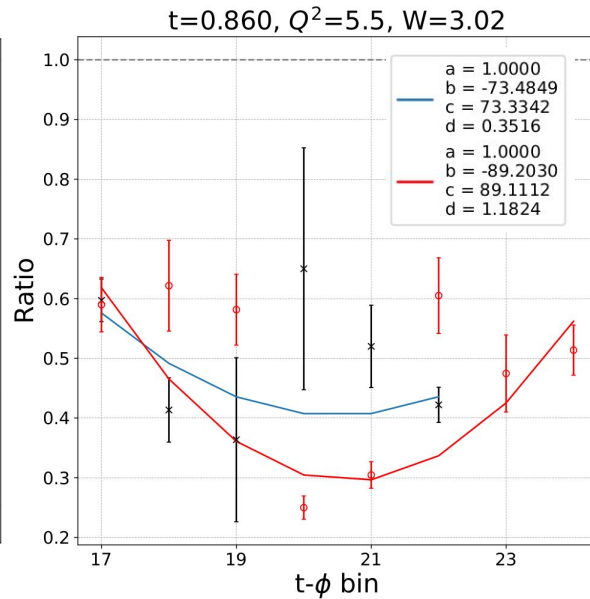
i=1

Q²=2.115, W=2.95

$$i=1 \quad a + b \cdot (W - W_c) + c \cdot (Q^2 - Q_c^2) + d \cdot (W - W_c) \cdot (Q^2 - Q_c^2)$$

Q²=3.0, W=3.14

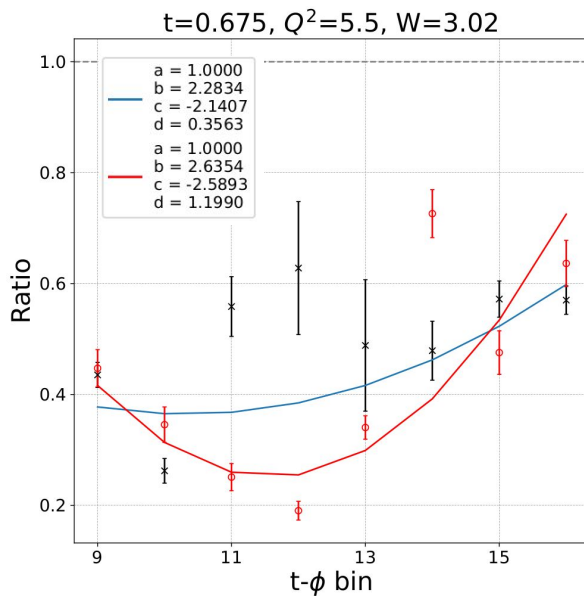t=0.180, Q^2=3.0, W=3.14   t=0.350, Q^2=3.0, W=3.14   t=0.415, Q^2=3.0, W=3.14
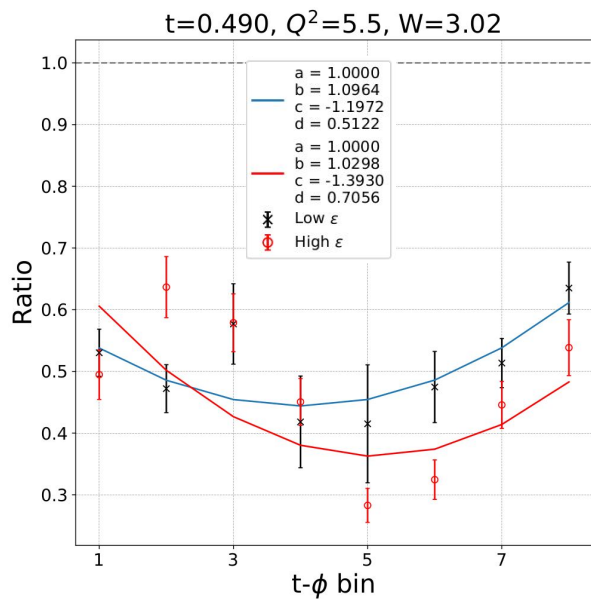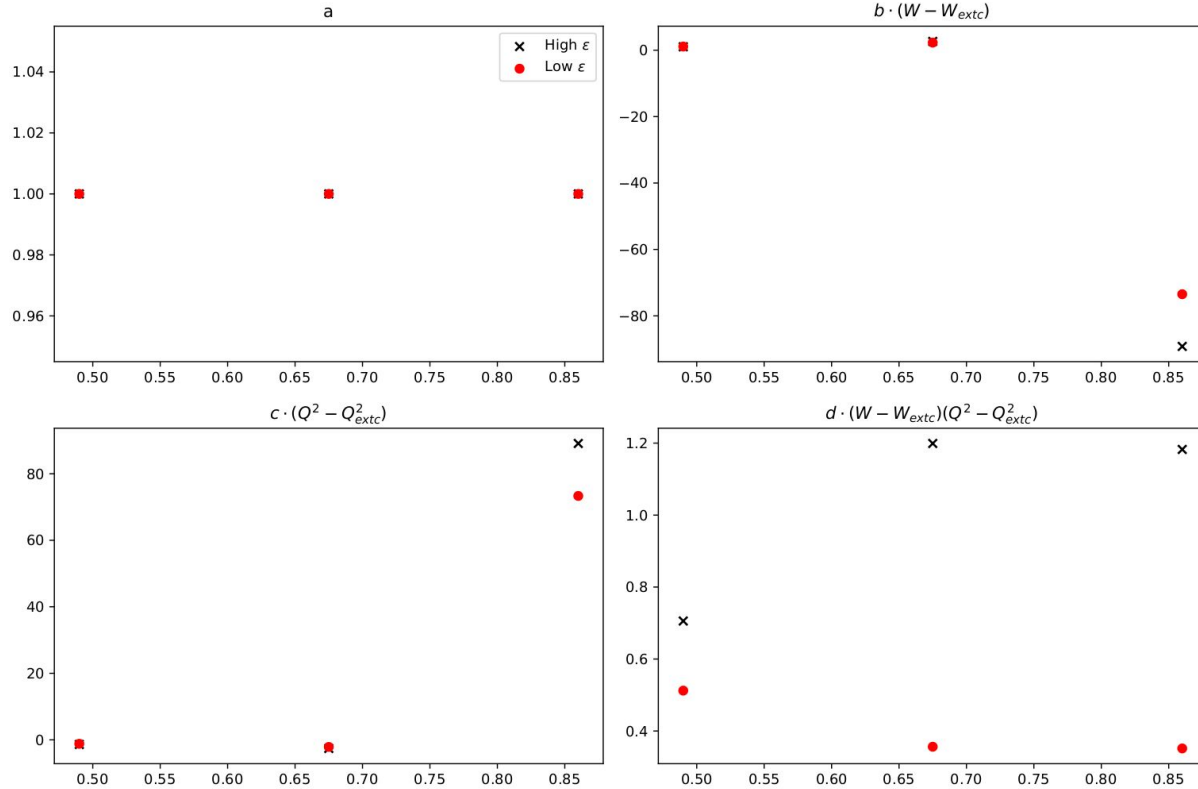
i=1 $a + b \cdot (W - W_c) + c \cdot (Q^2 - Q_c^2) + d \cdot (W - W_c) \cdot (Q^2 - Q_c^2)$

Q^2=3.0, W=3.14

i=1 $a + b \cdot (W - W_c) + c \cdot (Q^2 - Q_c^2) + d \cdot (W - W_c) \cdot (Q^2 - Q_c^2)$
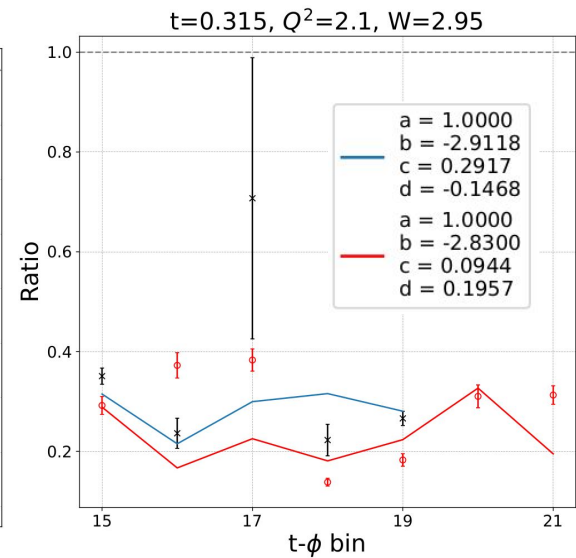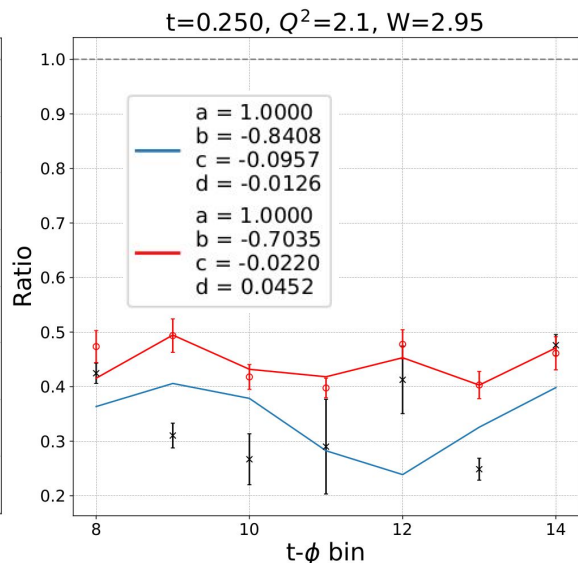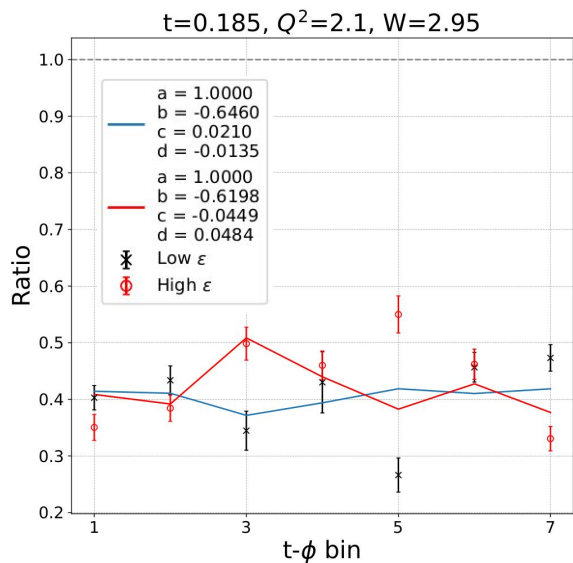
$Q^2=5.5$, W=3.02

i=1 $a + b \cdot (W - W_c) + c \cdot (Q^2 - Q_c^2) + d \cdot (W - W_c) \cdot (Q^2 - Q_c^2)$

Q^2=5.5, W=3.02

$$i=1 \quad a + b \cdot (W - W_c) + c \cdot (Q^2 - Q_c^2) + d \cdot (W - W_c) \cdot (Q^2 - Q_c^2)$$
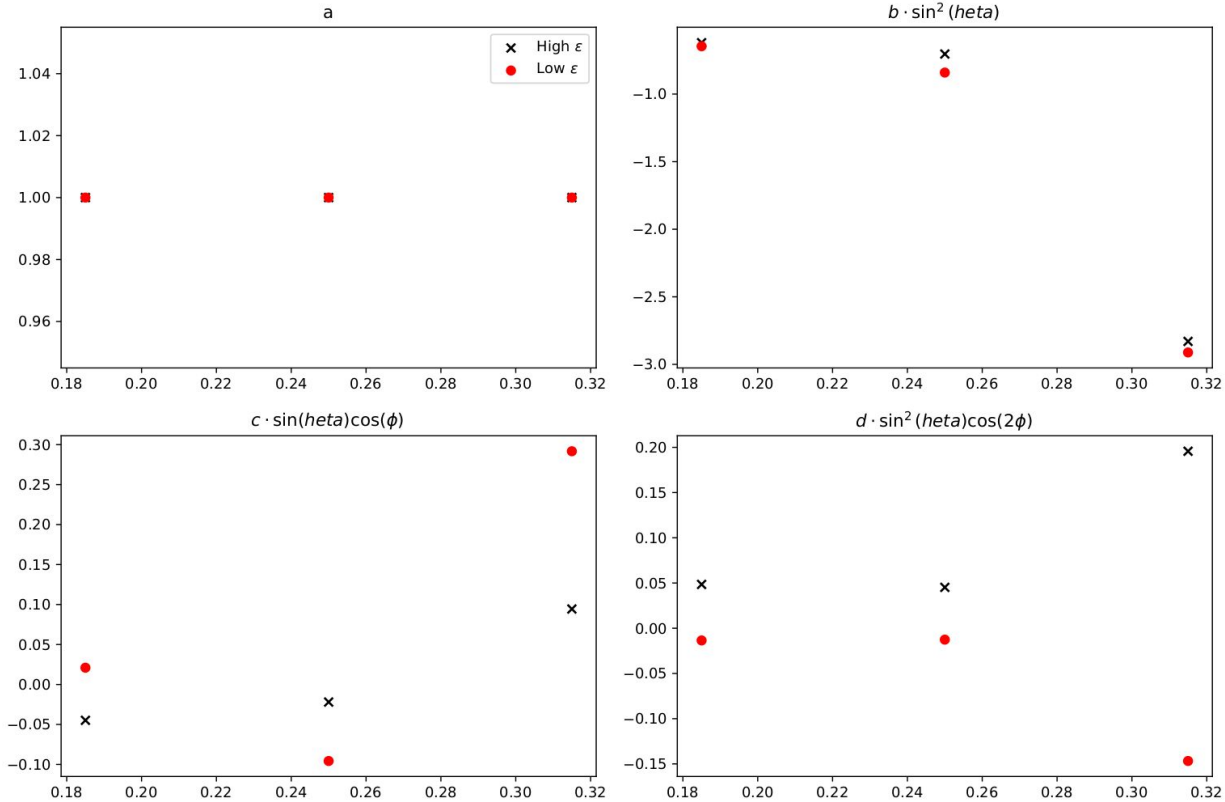
$Q^2=2.115$, W=2.95

i=1

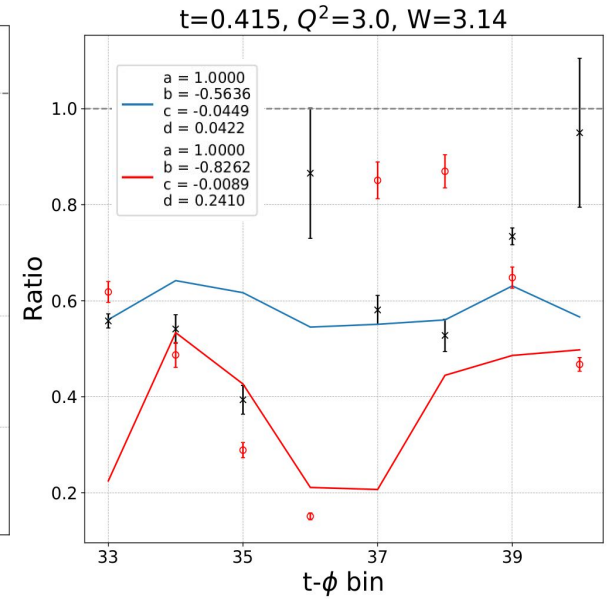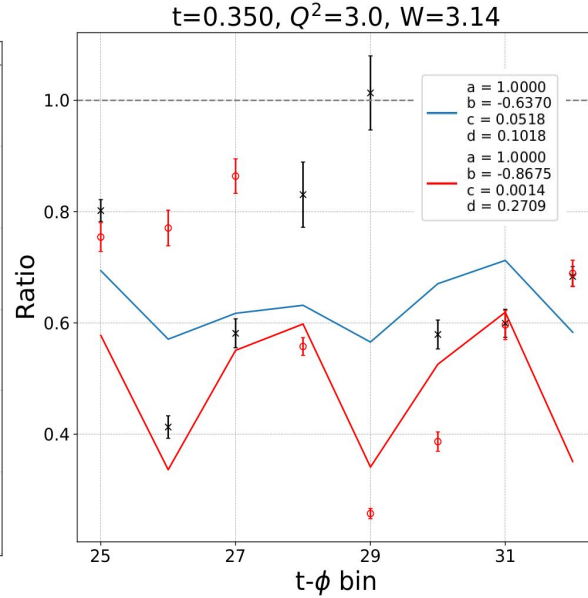$$a + b \cdot \sin^2\theta + c \cdot \sin\theta\cos\phi + d \cdot \sin^2\theta\cos 2\phi$$

$Q^2=2.115, W=2.95$

a

$b \cdot \sin^2(heta)$

$c \cdot \sin(heta)\cos(\phi)$

$d \cdot \sin^2(heta)\cos(2\phi)$

High ε
Low ε

i=1

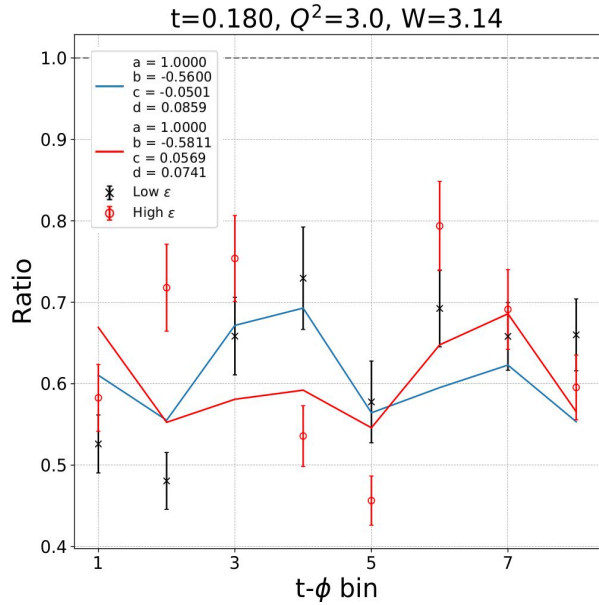$$a + b \cdot \sin^2\theta + c \cdot \sin\theta\cos\phi + d \cdot \sin^2\theta\cos 2\phi$$

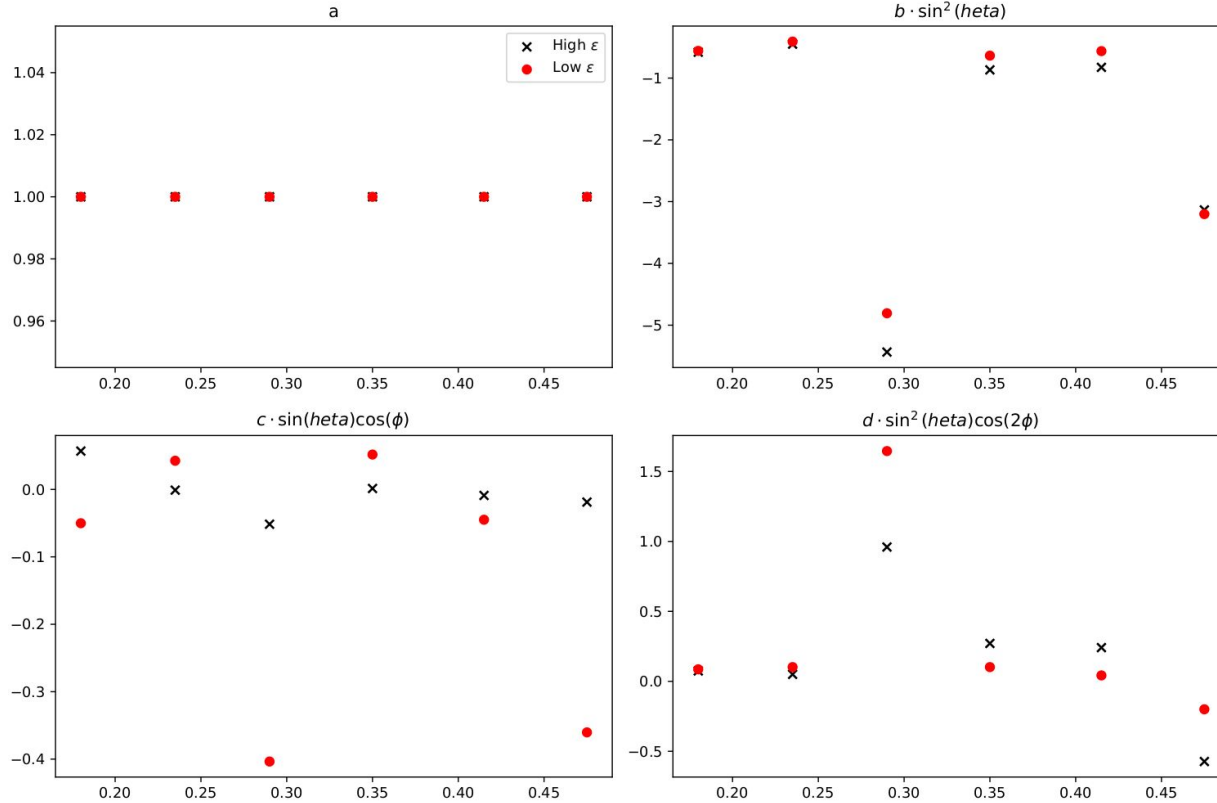$$a + b \cdot \sin^2 \theta + c \cdot \sin \theta \cos \phi + d \cdot \sin^2 \theta \cos 2\phi$$
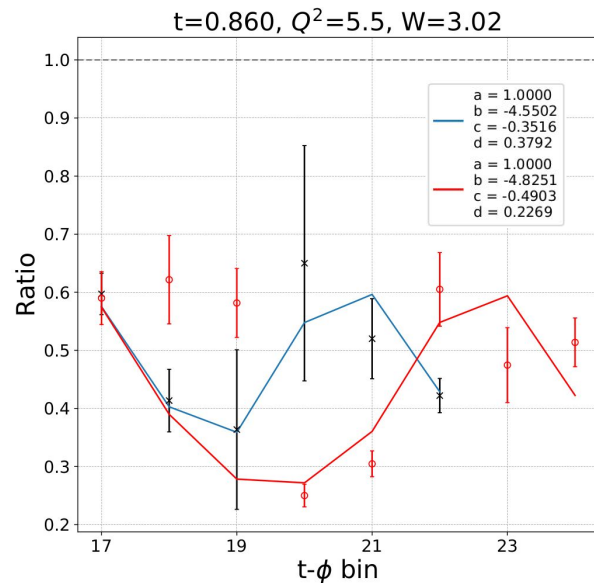
$Q^2=3.0$, W=3.14

i=1

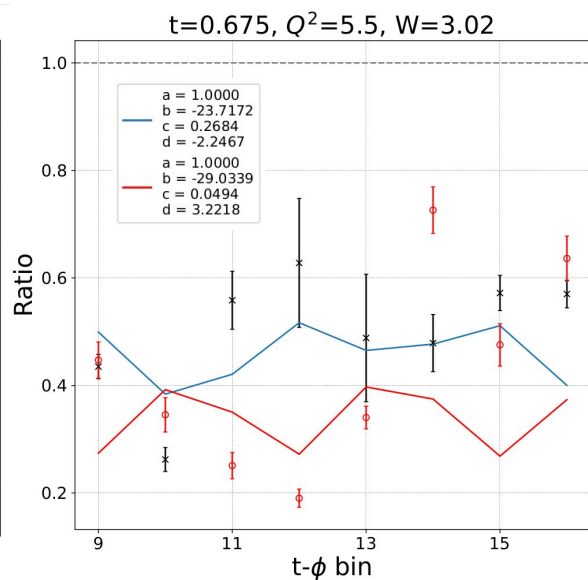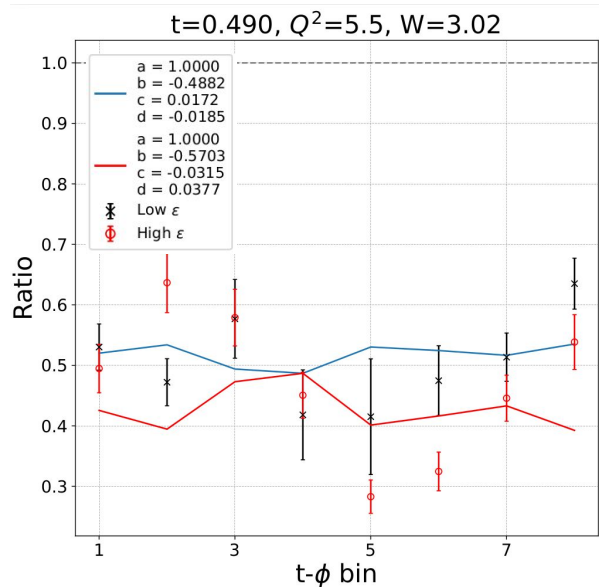$$a + b \cdot \sin^2 \theta + c \cdot \sin \theta \cos \phi + d \cdot \sin^2 \theta \cos 2\phi$$

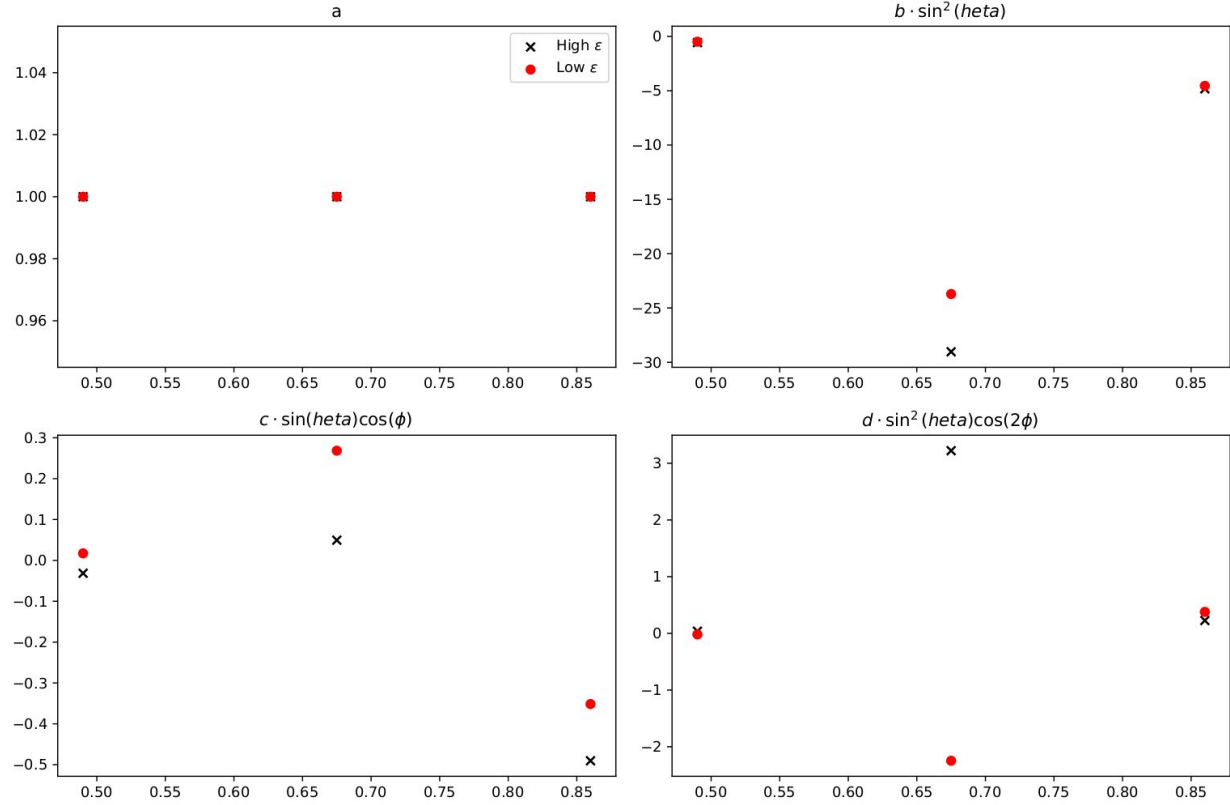$$a + b \cdot \sin^2\theta + c \cdot \sin\theta\cos\phi + d \cdot \sin^2\theta\cos 2\phi$$

i=1

$Q^2=5.5, W=3.02$

i=1

$$a + b \cdot \sin^2 \theta + c \cdot \sin \theta \cos \phi + d \cdot \sin^2 \theta \cos 2\phi$$