$\gamma n \to \pi^- p$ cross section extraction
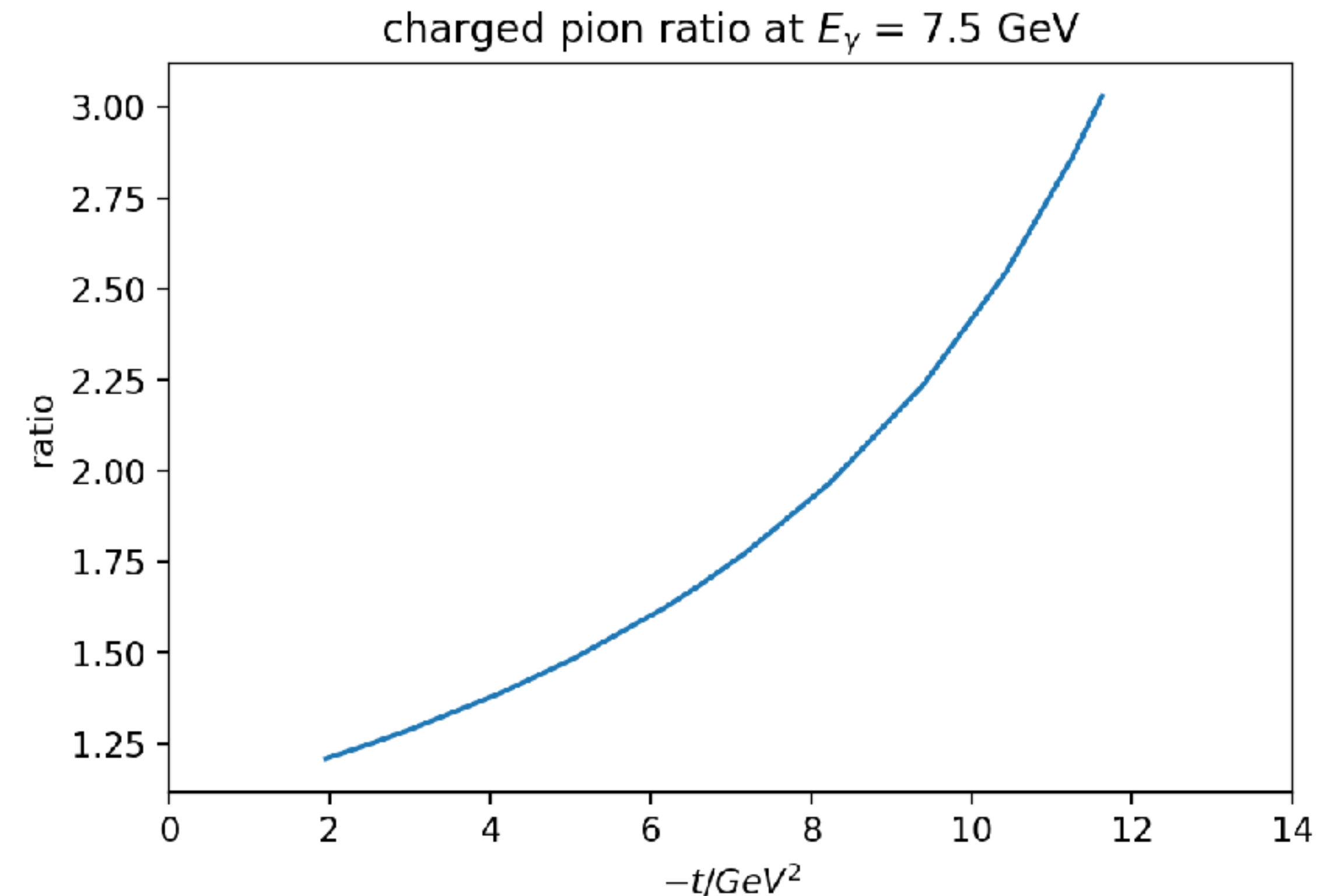
- Exclusive charged pion ratio

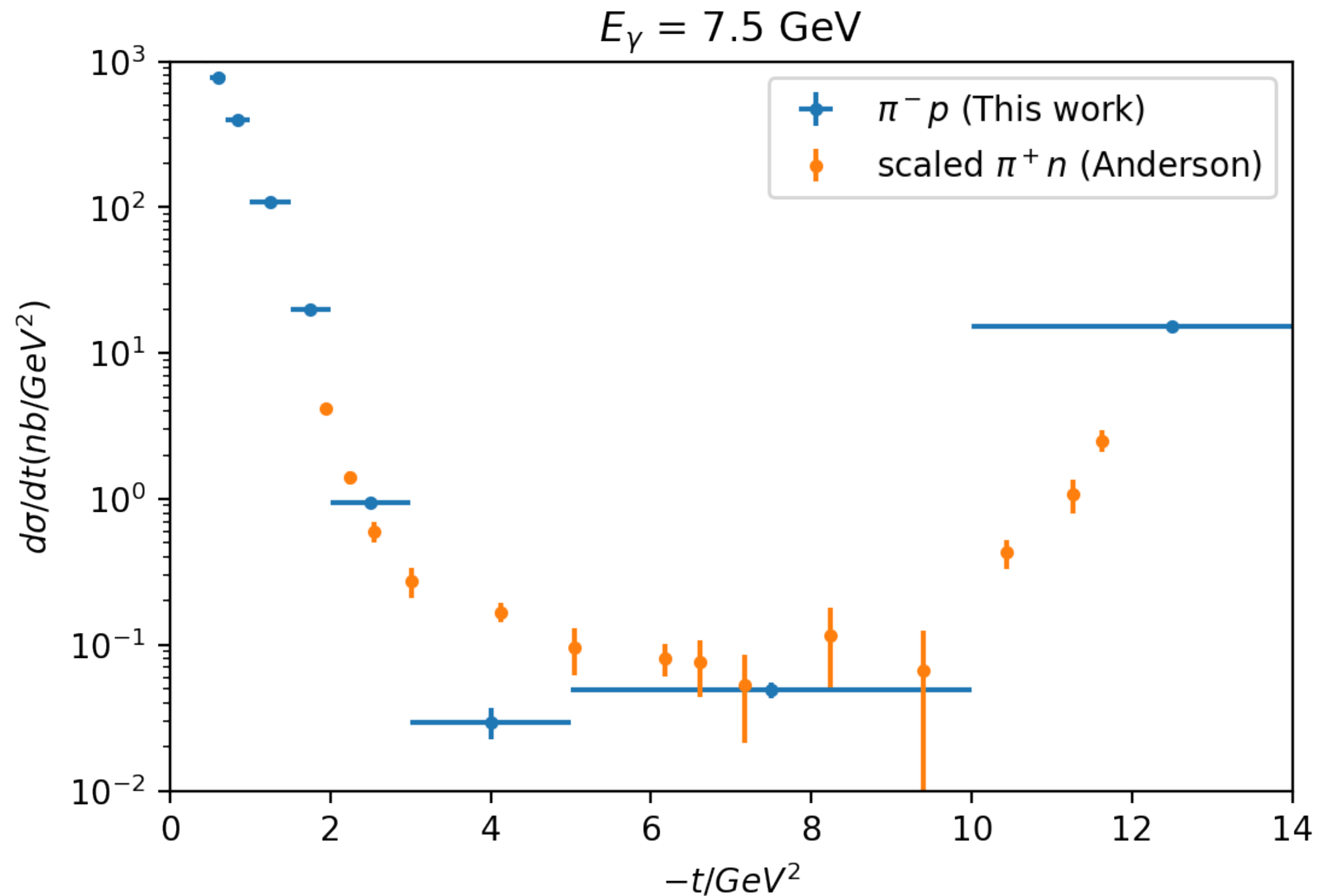- $$\frac{d\sigma/dt(\gamma n \to \pi^- p)}{d\sigma/dt(\gamma p \to \pi^+ n)} = (\frac{ue_d + se_u}{ue_u + se_d})^2$$

- s, u: Mandelstam variables

- e_d, e_u: charge of d, u quark

charged pion ratio at $E_\gamma = 7.5$ GeV

$\gamma n \to \pi^- p$ cross section extraction

- Preliminary cross section: compare with world data

$E_\gamma = 7.5$ GeV

$\gamma n \rightarrow \pi^- p$ cross section extraction

- Currently working on:

- Improve the yield extraction with a double Gaussian fitting

- Improve the photon energy binning by combining tagger counters

- Resolve a misalignment of the reconstructed photon in simulation