

CT path in Hall D

Goals:

- Looking for hadrons in squeezed configuration (not necessarily PLC)
- Process could be reaction-dependent (e-scattering hasn't seen it)

Advantages of Hall D over previous experiments using photoproduction:

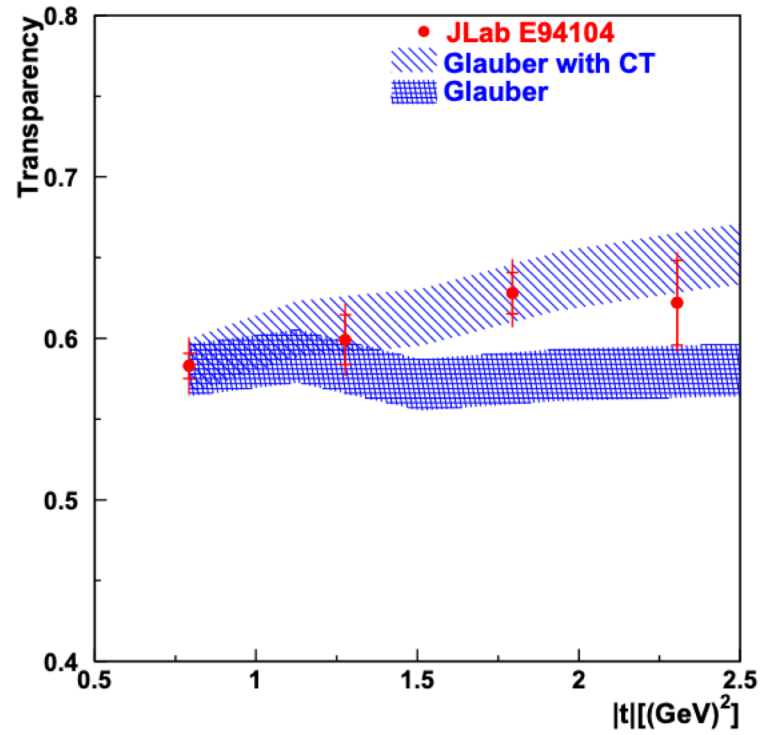
- Large coverage in CM angle
- Many different reaction channels
- Light nuclei ideal due to small nuclear size

How to use the data, isolate mean field:

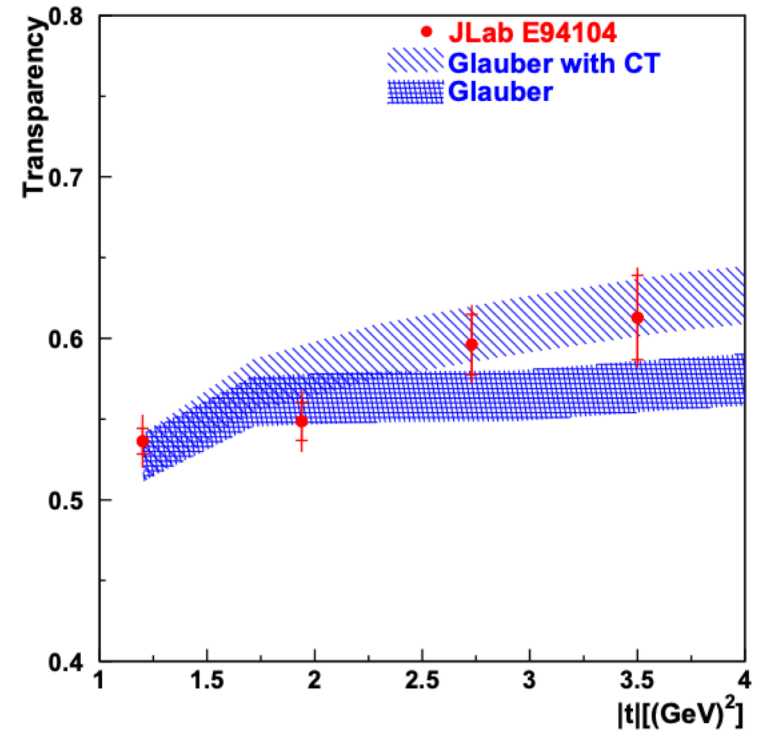
- Ratios of $^{12}\text{C}/^4\text{He}$
- Ratios of ^4He or ^{12}C to deuterium (if enough, unlikely with 2 days)
- Ratios of ^4He or ^{12}C to PWIA, use deuterium as normalization

$\gamma n \rightarrow \pi^- p$ in 4He in Hall A

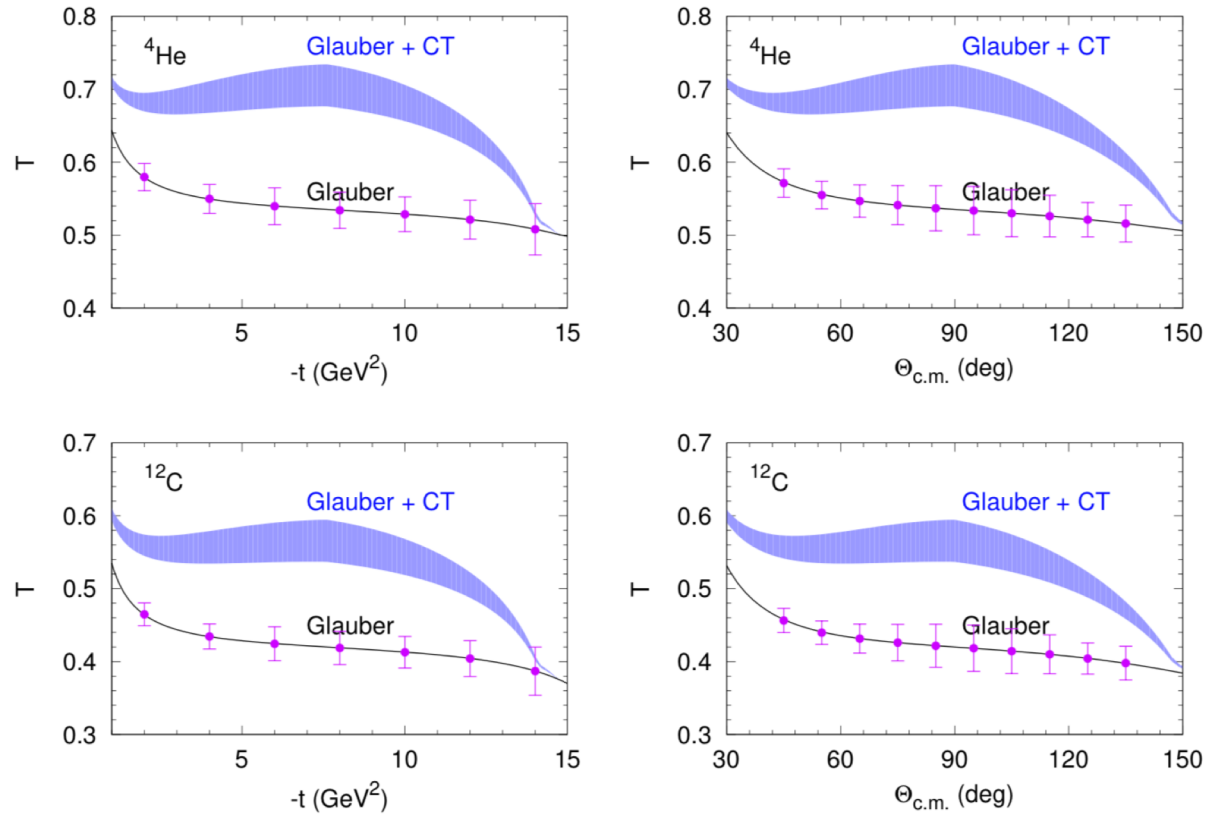
70° c.m. scattering



90° c.m. scattering



$$\gamma n \rightarrow \pi^- p$$

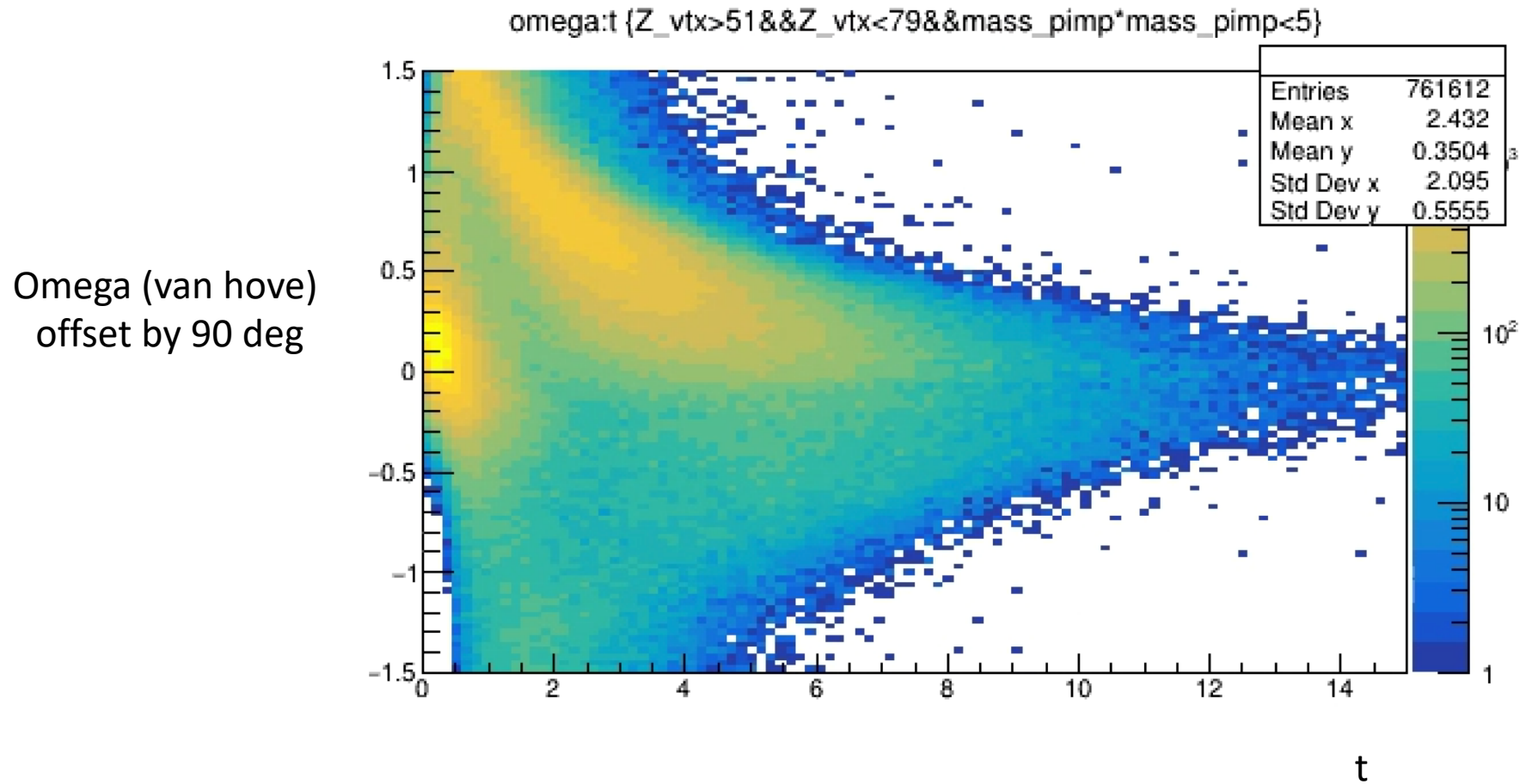


From the proposal:

- Definitely not going to reach t of 14 (!!!!), but why?
- Measuring $-t$ up to 3.5 looks useful
- Can still scan in the cm angle
- Expect largest effect at $\theta_{\text{CM}} = 90$ deg

Rho0 candidates

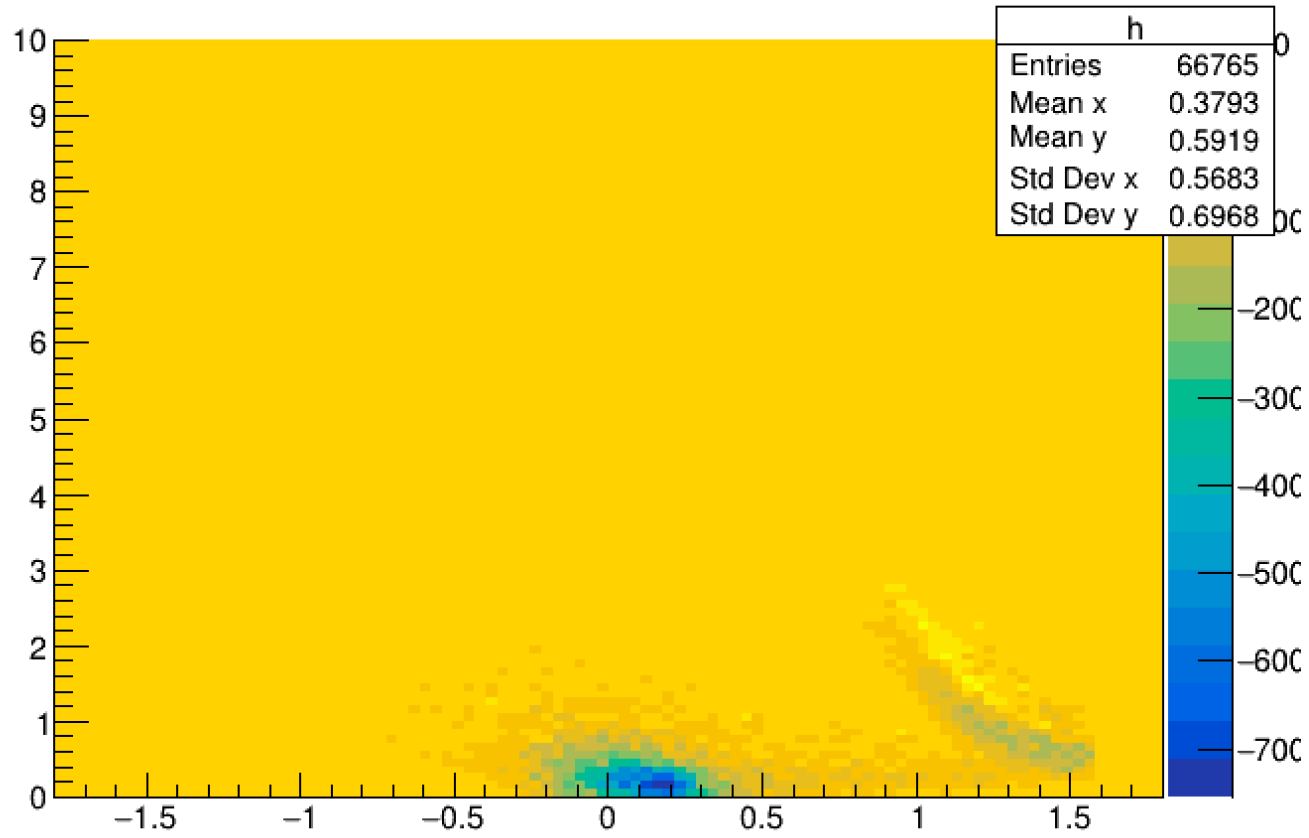
- need to get more data in this plot (how much??)
- does not have accidental subtraction
- probably has some extra delta background, but just to get a feel of the phase space



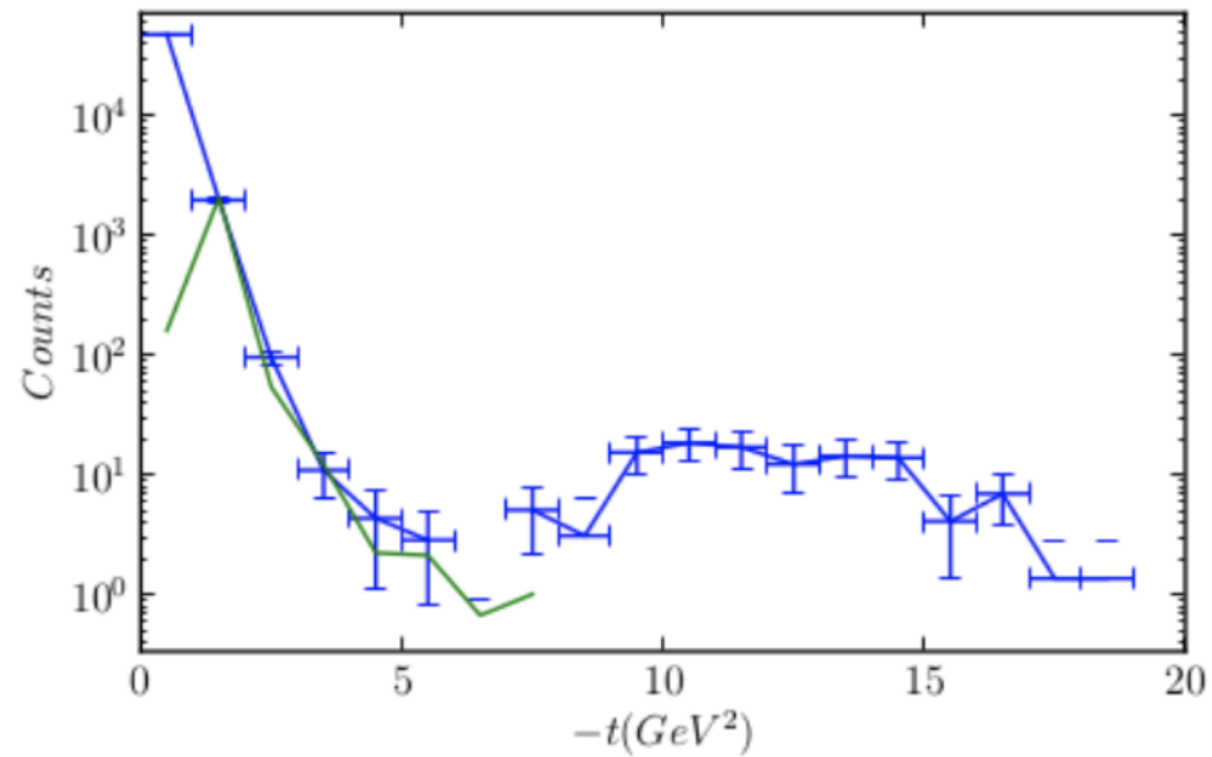
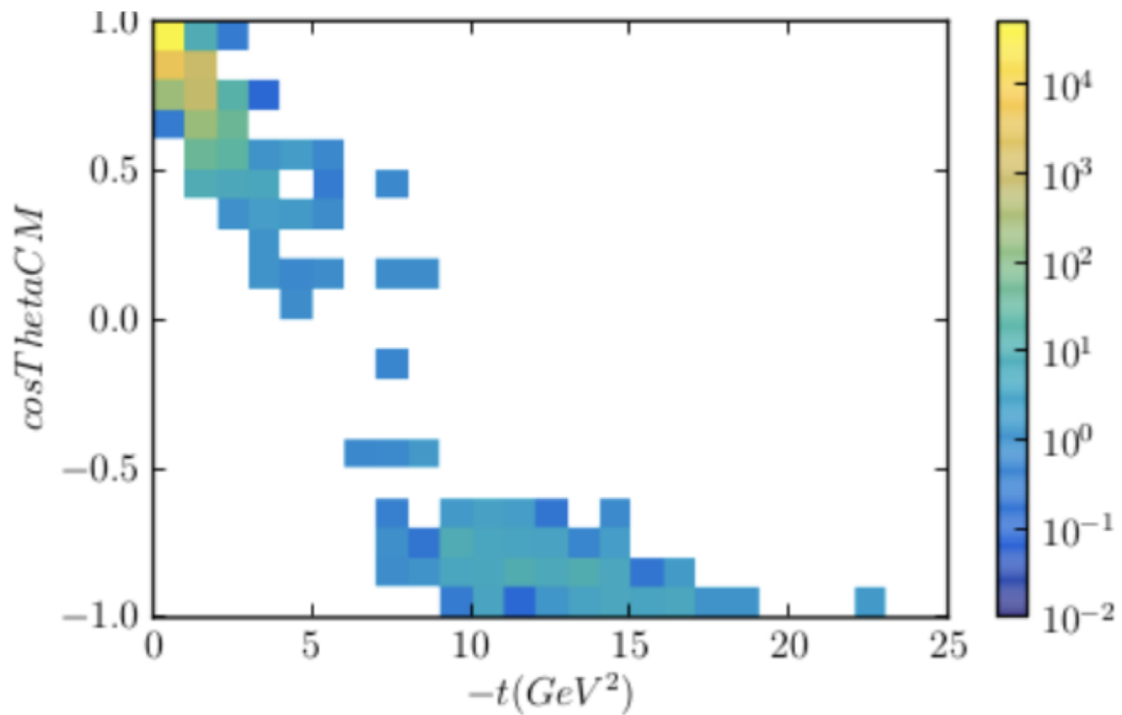
u>2 cut, probably some delta contamination

For all runs:

t:omega {(Z_vtx>51 && Z_vtx< 79) && mass_pimp*mass_pimp<5 && u>2}



Rho- events, 10% of the data



What happens to the events around 0?
Is this an acceptance effect?