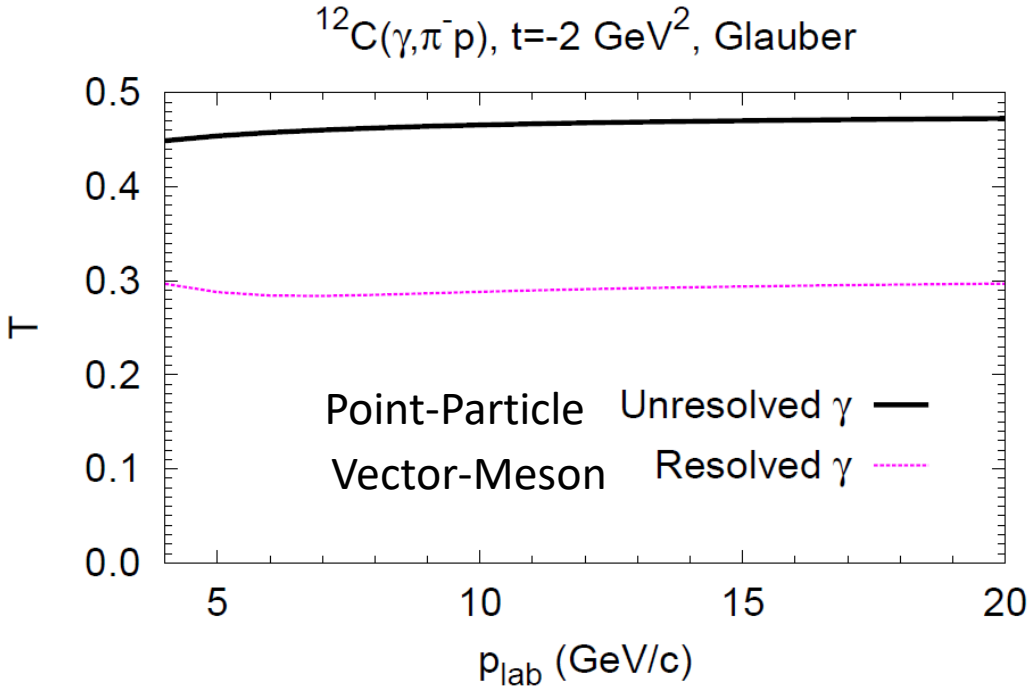
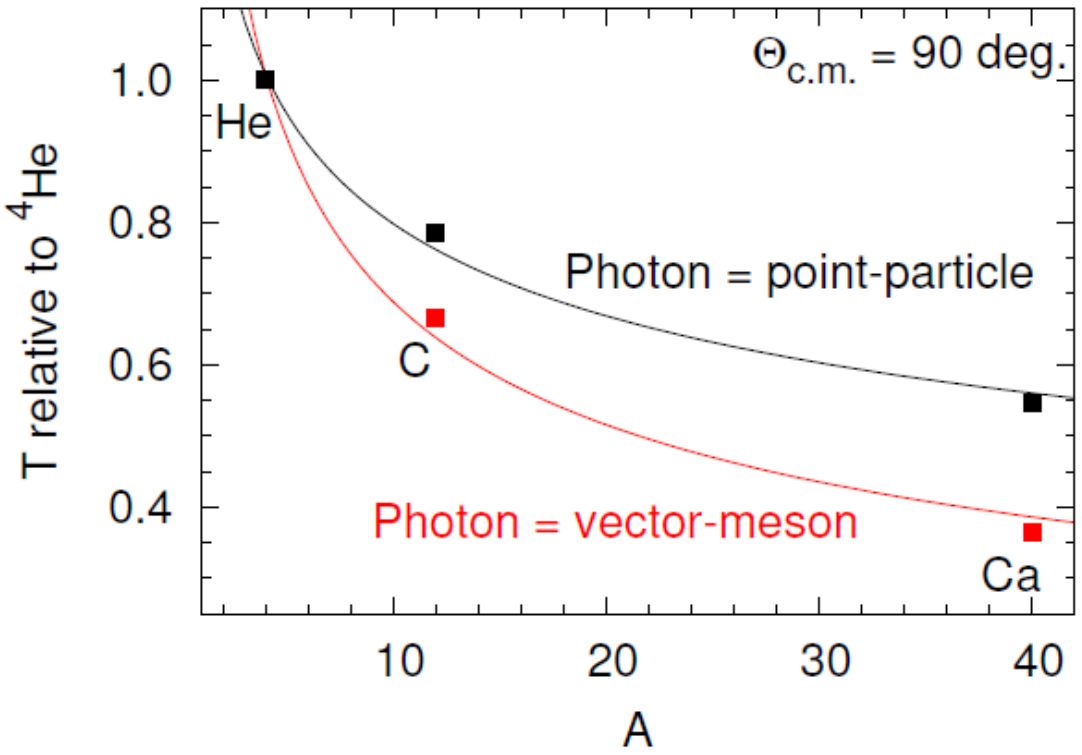
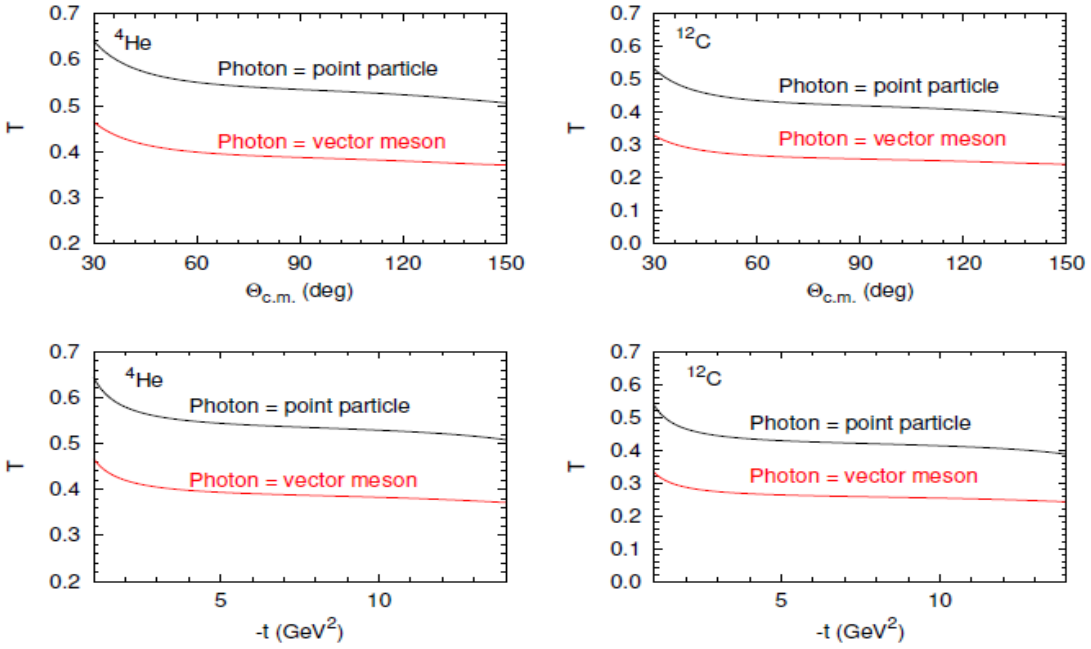
Analysis Topics

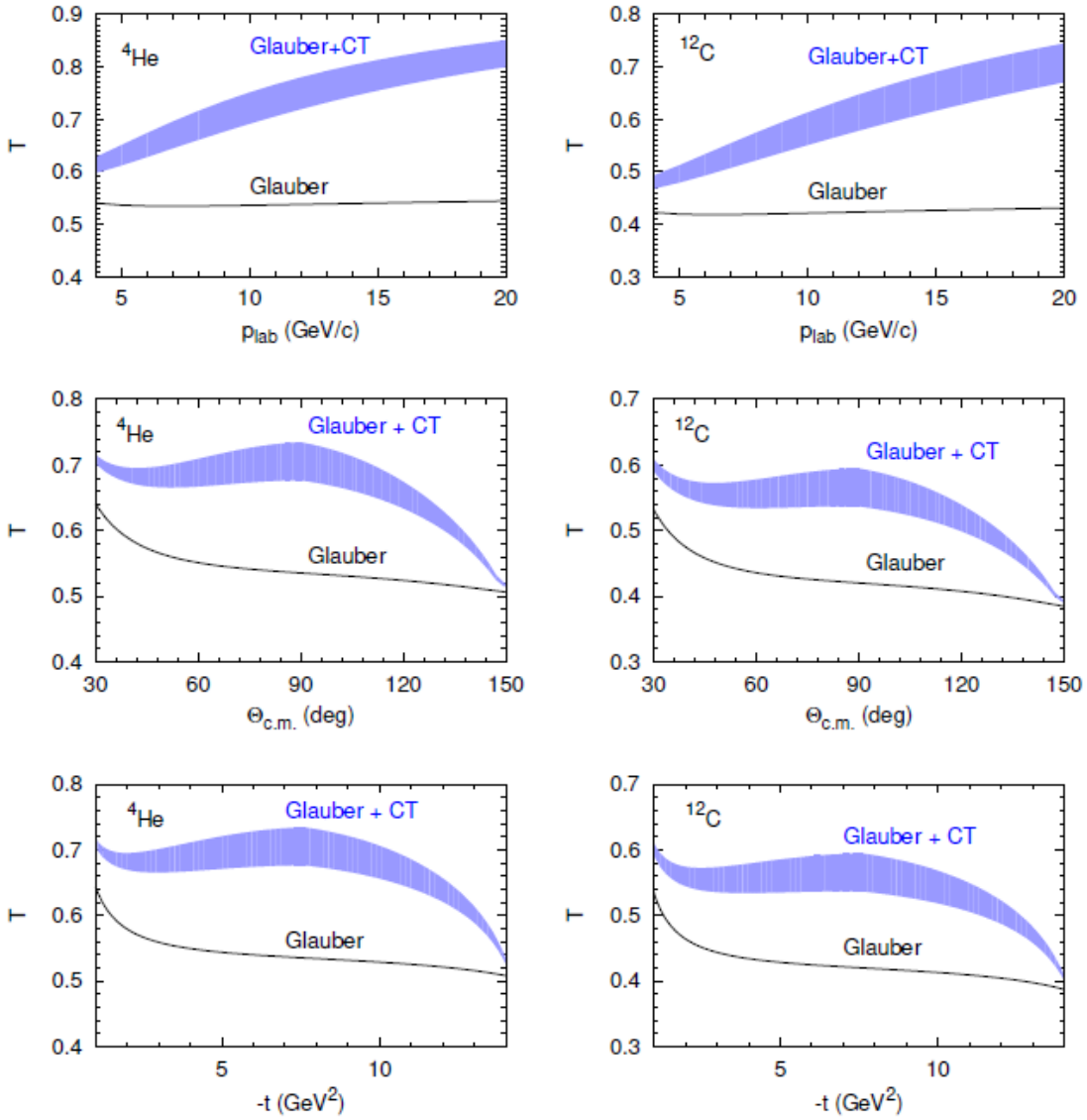
- Measurement of Photon and Color Transparency in Light Nuclei with Rho0 Photoproduction Using a Real Photon Beam
- Measurement of Photon and Color Transparency in Light Nuclei with π- Photoproduction Using a Real Photon Beam





Observables to be studied





These plots are for A(ɣ,π$^-$,p) but we will begin with A(ɣ, ρ0 ,p)

Analysis Steps

- Look at the $\rho 0$ channel with accidentals and background subtracted.
- Extract |t|-distribution for ($^{12}C/^{2}H$, $^{4}He/^{2}H$ and $^{12}C/^{4}He$) for the $\rho 0$ channel.
- Extract ratio of ($^{12}C/^{2}H$, $^{4}He/^{2}H$ and $^{12}C/^{4}He$) as a function of Photon Momentum(P_{lab}) at fixed |t, as a function of $\theta_{C.M}$ and there after extract photo production cross sections.
- Study of Photon Transparency to determines the behavior of photon either as a vector-meson or as a point like particle.
- Eventually study Color Transparency.

After the rho channel is completed, we will look at A(ɣ,π^- ,p) channel as a consistency check.