The Reaction $\gamma p \rightarrow Xp$

What is the "right" beam energy?

- Need to get above threshold for M_X
- Not so high that cross section falls off

  e.g., see Afanasev & Page, Phys Rev D57(1998)6771
- Want clean separation of backgrounds...

  $\Rightarrow$ Not so high in energy

  ... and discrimination at baryon vertex

  $\Rightarrow$ So not so low, either
- High enough to get past t_{min}:

$$t = (p_\gamma - p_X)^2$$

$$\frac{d\sigma}{d|t|} \propto e^{-b|t|} \; (b \approx 4/\mathrm{GeV}^2) \text{ and } \sigma = \int_{t_{min}}^{t_{max}} \frac{d\sigma}{d|t|} dt$$