

## Projects to get completed and questions answered for proposal submission

- Fix the coherent peak energy
- Fix the target position
- START counter in or out?
- Finalize acceptance calculation for Primakoff  $\pi^+\pi^-$  events. Is the simulation working correctly?
- Simulate azimuthal distribution of Primakoff  $\pi^+\pi^-$  events. Can we use this to extract the Primakoff yield?
- Tagger microscope intensity rate? Probably want a conservative rate.
- Need to have an estimate of what trues/accidentals will be with electromagnetic and hadronic backgrounds turned on
- Do we need the proposed Cherenkov counter for GlueX?

- Can we use the Primakoff  $\pi^0$  events that come for free?
  - i. Include nuclear coherent in  $\pi^0$  event generator. Not done yet.
  - ii. Calculate acceptance for  $\pi^0$  with linearly polarized photons
  - iii. Use azimuthal distribution of  $\pi^0$  to measure photon polarization?
  - iv. Is  $^{208}\text{Pb}$  the best target for this? There's very little wide angle nuclear coherent with lead; this impacts the polarization measurement.
  - v. Use  $\pi^0$  yield to measure  $N_\gamma \cdot T$ , # photons  $\times$  target thickness? Probably want same photon energy as PRIMEX.
- What is our trigger condition going to be?
  - i. (2 charged tracks in FDC's) ORed with ( $E_{\text{FCAL}} > E_{\text{threshold}}$ ) ?
  - ii. PID for the pion tracks?
  - iii. Trigger rate?
- Nuclear coherent background in the  $\pi^+\pi^-$  channel (Sergey)
- Nuclear incoherent background in the  $\pi^+\pi^-$  channel (Tulio)
- Projected error bars on  $\sigma(\gamma\gamma \rightarrow \pi^+\pi^-)$  ?
- Projected error bar on  $\alpha_\pi - \beta_\pi$  ?