

Welcome & LOI Goals

Igal Jaeglé

Workshop on
Photoproduction Studies on the Deuteron and Helium-3 in Hall D

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Welcome

Workshop on “Photoproduction Studies on the Deuteron and Helium-3 in Hall D”

- One-day hybrid workshop with 9 talks:
 - ▶ 4 experimental talks highlighting the experimental capabilities
 - ▶ 5 theoretical talks to brainstorm ideas and provide strong motivation for:
 - ★ A long deuteron run to cover large $-t (> 2 \text{ GeV}^2)$
 - ★ A short helium-3 run to cover small $-t (< 2 \text{ GeV}^2)$
- The end product is a LOI to be submitted in early May

LOI Goals

Present a broad range of physics motivations which requires different trigger conditions

- Open trigger (as in GlueX-I or SRC/CT runs) requires running at low intensity
 - ▶ Single track channel (eg π^\pm photoproduction and hard deuteron photodisintegration)
 - ▶ KY photoproduction
- Restricted trigger (as in GlueX-III) can run at high intensity, 5 to 10 times larger than GlueX-I
 - ▶ J/ψ physics
 - ▶ Single neutral meson (but limited $-t$ range), double meson, or hybrid photoproduction
- Run scenarios: 2-3 years to collect 300 pb^{-1} , or 1-2 years to collect $750\text{--}1500 \text{ pb}^{-1}$