

LEPTOPHOBIC BOSON SEARCH

PHYSICS PROCESS

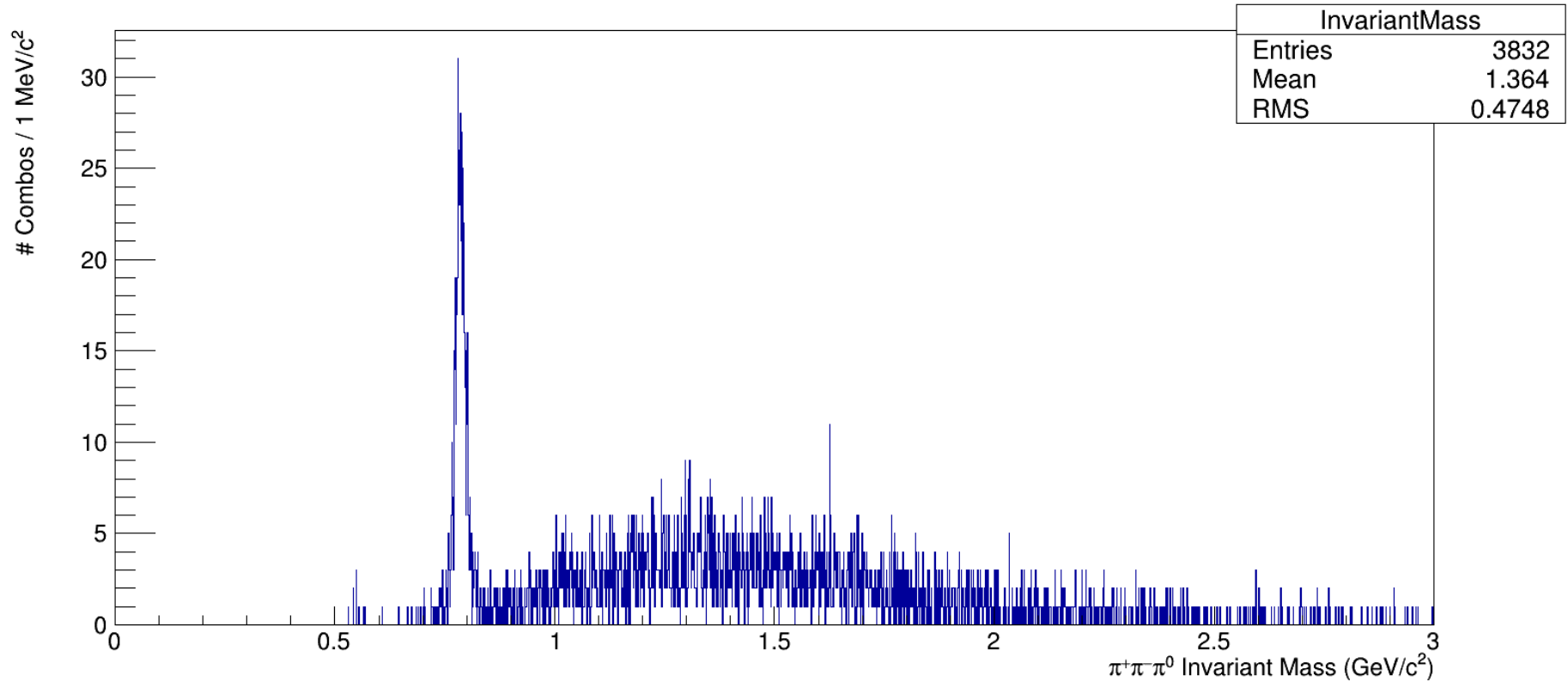
- Present expected exclusion reach on a B-Boson search for the first physics run of GlueX
- Looks like an ω or ϕ with a different mass
- $\gamma p \rightarrow \pi^+ \pi^- \pi^0$
- $\gamma p \rightarrow \pi^+ \pi^-$
- $\gamma p \rightarrow \pi^0 \gamma$

GOALS

- Determine detector's resolution on final state invariant mass in given channels
- Determine efficiency after event selection
 - Selection including PID cuts, π^0 identification, missing/reconstructed proton
- Determine background size and shape in each final state
- Calculate the additional power on that sensitivity with the data from the Physics run

INITIAL LOOK AT 3π

Cuts + Kinematic Fit



INITIAL LOOK AT 3π

Just Cuts

