Group meeting
March 8th, 2024

Instruction responsibilities

- Classes (spring break ☺):
  - PHY 252:
    - Rewrote Three lectures
  - PHY 331:
    - Graded last ½ of exams
    - Graded homework

- Undergraduate independent study and research:
  - Luis: We figured out the connection between coupling constants for axion and pion coupling to E.B
  - Preston: Met just prior to this meeting?

Service responsibilities

- Committee:
  - GlueX Compton Analysis Review Committee:
    - Current status of committee = ?
  - Graduate College Completion Fellowship Committee:
    - Now have access to Dropbox packets (plan to score next week)
  - Pre Award Faculty Panel:
    - Status : Next meeting will be when I am teaching

Group responsibilities

- Paperwork for carryover has been submitted
- Met with Katelyn Tuesday and Thursday

Analysis

- Modified parser inside plotResults.cc
- Working on presentation

$KK\pi$ update

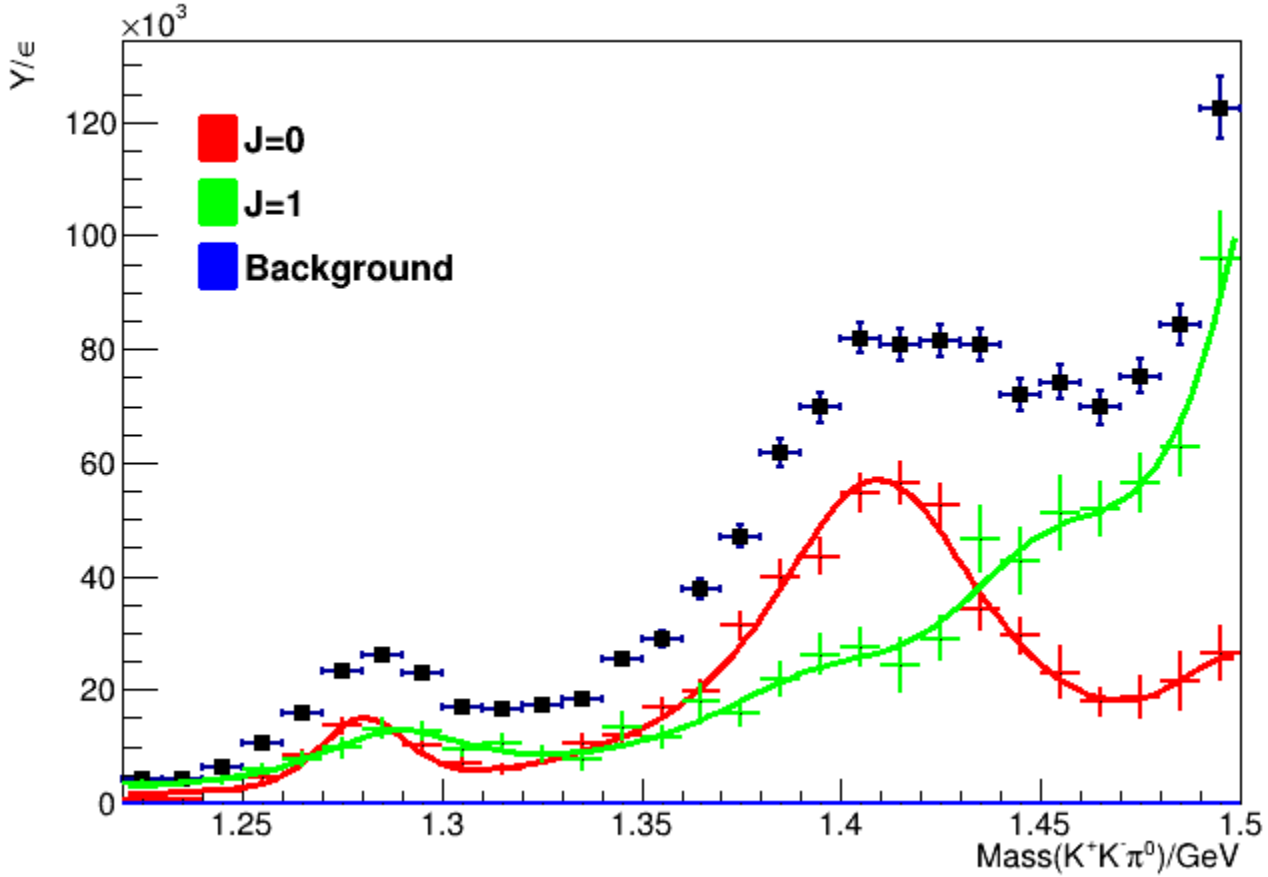
No Isobar line shape
(phase space mass distribution)

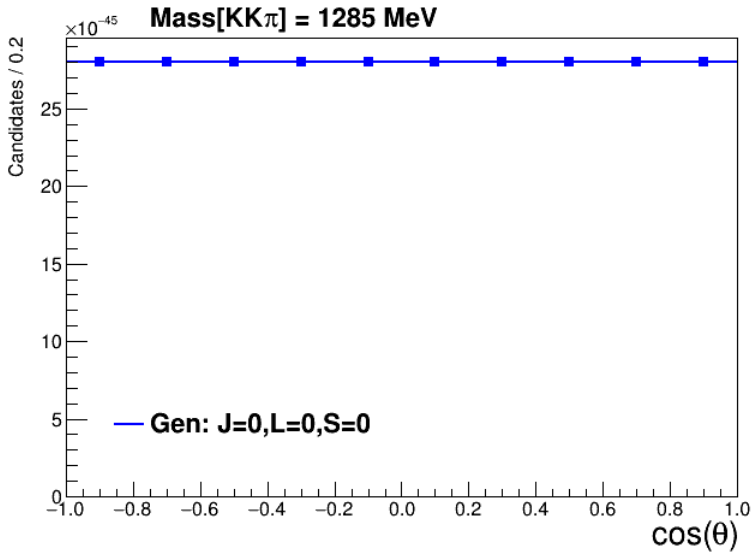
Mass-independent PWA of $KK\pi$

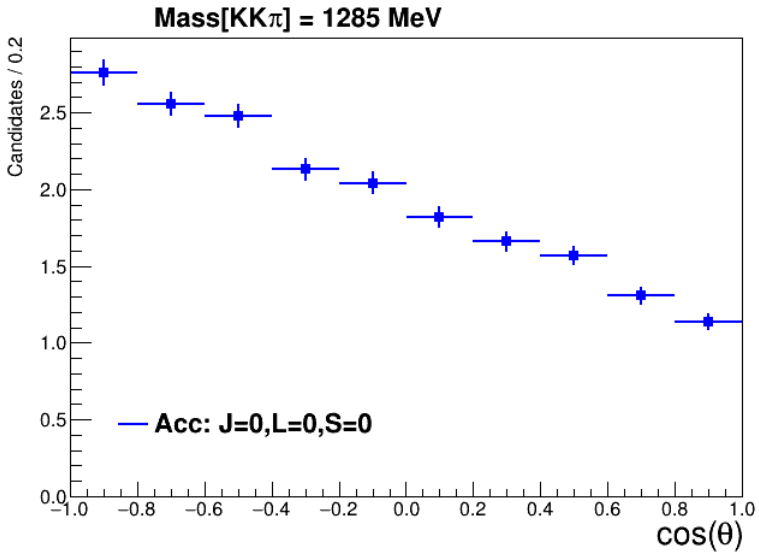
Included:

- $J=0^-$
  - $(K^+K^-)_{S\text{-}phsp}\pi^0$
  - $(K^+\pi^0)_{P\text{-}phsp}K^-$
  - $(K^-\pi^0)_{P\text{-}phsp}K^+$
- $J=1^+$
  - $(K^+K^-)_{S\text{-}phsp}\pi^0$
  - $(K^+\pi^0)_{P\text{-}phsp}K^-$
  - $(K^-\pi^0)_{P\text{-}phsp}K^+$
- $J=1^-$
  - $(K^+\pi^0)_{P\text{-}phsp}K^-$
  - $(K^-\pi^0)_{P\text{-}phsp}K^+$

PWA Results for $J = 0,1$




Mass[KKπ] = 1285 MeV
×10^-45
Candidates / 0.2
Gen: J=0,L=0,S=0
cos(θ)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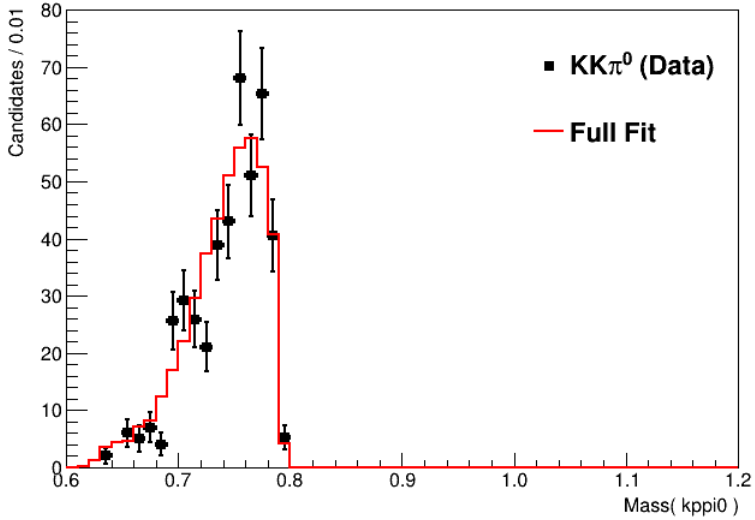
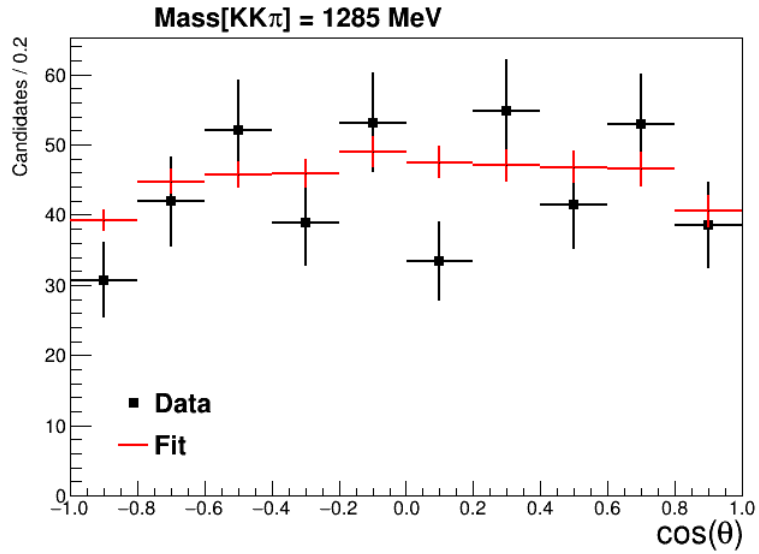

Candidates / 0.01
KKπ0 (Data)
Full Fit
Mass(kppi0)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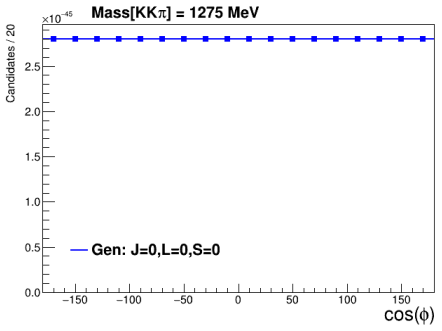
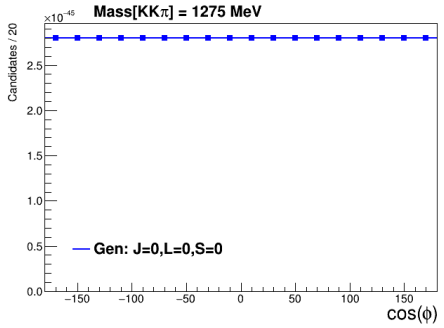
Candidates / 0.2
Data
Fit
cos(θ)


Mass[KKπ] = 1275 MeV
Candidates / 20
Gen: J=0,L=0,S=0
cos(ϕ)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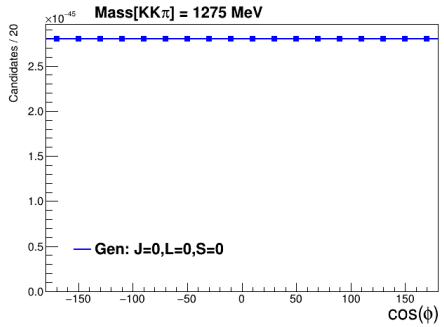
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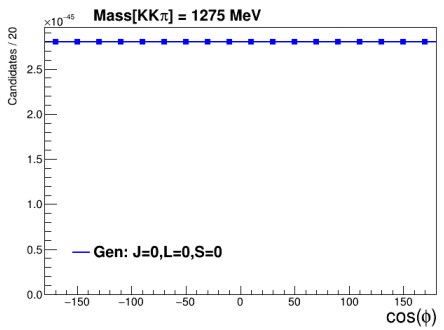
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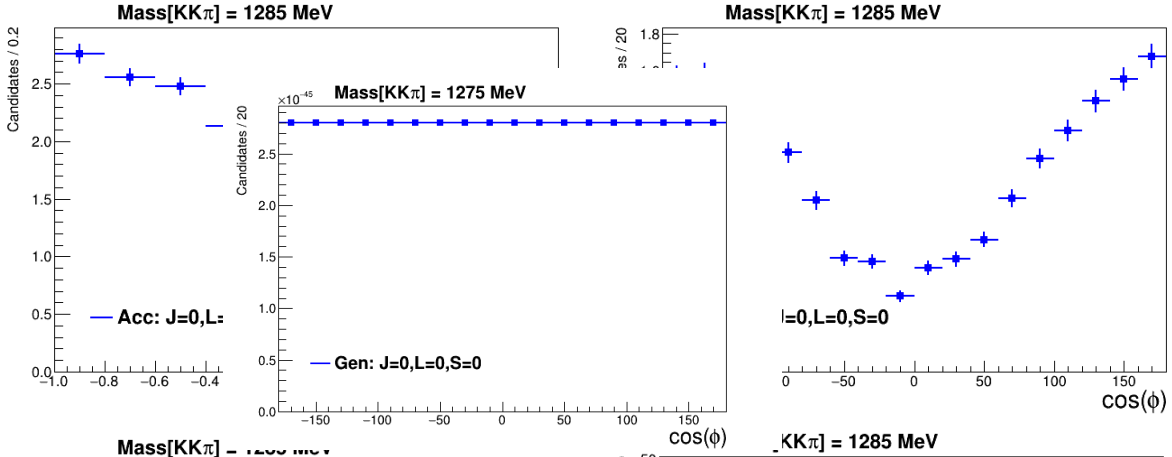
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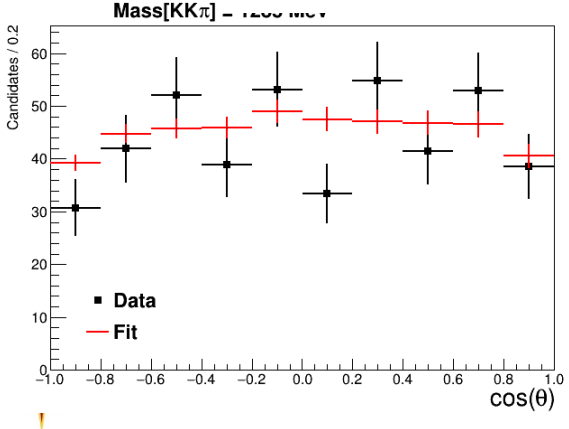
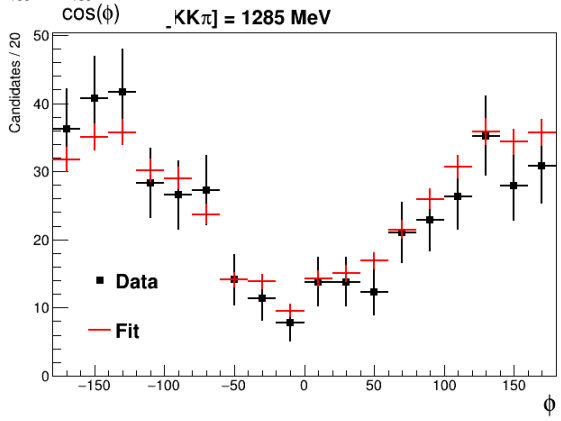

Candidates / 0.2
Data
Fit
cos(θ)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Analysis