Low-mass $K^+K^-\pi^0$ study



 $K^+K^-\pi^0$: Old mass-range (1.22–1.32 GeV)





 $K^+K^-\pi^0$: New mass-range (1.2–1.5 GeV)





Mass[$K^+\pi^0$] vs Mass[$K^-\pi^0$]

Reaction: $\gamma p \rightarrow p K^+ K^- \pi^0$



Mass[$K^+\pi^0$] vs Mass[$K^-\pi^0$]

Reaction: $\gamma p \rightarrow p K^+ K^- \pi^0$ asdf Can group : $K^- \pi^0$ as $K^{-*}(892)$



Mass[$K^+\pi^0$] vs Mass[$K^-\pi^0$]

Reaction: $\gamma p \rightarrow p K^+ K^- \pi^0$ asdf Can group : K⁻ π^0 as $K^{-*}(892)$ **OR** K⁺ π^0 as $K^{+*}(892)$



Mass[$K^+\pi^0$] vs Mass[$K^-\pi^0$]



Mass[$K^+\pi^0$] vs Mass[$K^-\pi^0$]



Mass[$K^+\pi^0$] vs Mass[$K^-\pi^0$]



Mass[$K^+\pi^0$] vs Mass[$K^-\pi^0$]





• Mass not consistent with K^{+*} or K^{-*}



• Mass not consistent with K^{+*} or K^{-*} -





• Mass not consistent with K^{+*} or K^{-*} ·





• Mass not consistent with K^{+*} or K^{-*} –



• Mass consistent with K^{+*} and K^{-*}



• Mass not consistent with K^{+*} or K^{-*} –

• Mass consistent with K^{+*} and K^{-*}





• Mass not consistent with K^{+*} or K^{-*} –

• Mass consistent with K^{+*} and K^{-*}





• Mass not consistent with K^{+*} or K^{-*} —

• Mass consistent with K^{+*} and K^{-*}



• Mass consistent with K^{+*} XOR K^{-*}



• Mass not consistent with K^{+*} or K^{-*} —

• Mass consistent with K^{+*} and K^{-*}

• Mass consistent with K^{+*} XOR K^{-*} –



 $KK\pi$ type

0.8

• Mass not consistent with K^{+*} or K^{-*} —

• Mass consistent with K^{+*} and K^{-*}

• Mass consistent with K^{+*} XOR K^{-*} –



 $KK\pi$ type

 \overline{K}^* ? type

1.1 1.2 Mass[K⁻π⁰]/GeV

0.8

ss[K⁺π⁰]/Ge

0.8





















Preliminary fit to the $KK\pi$ -type





