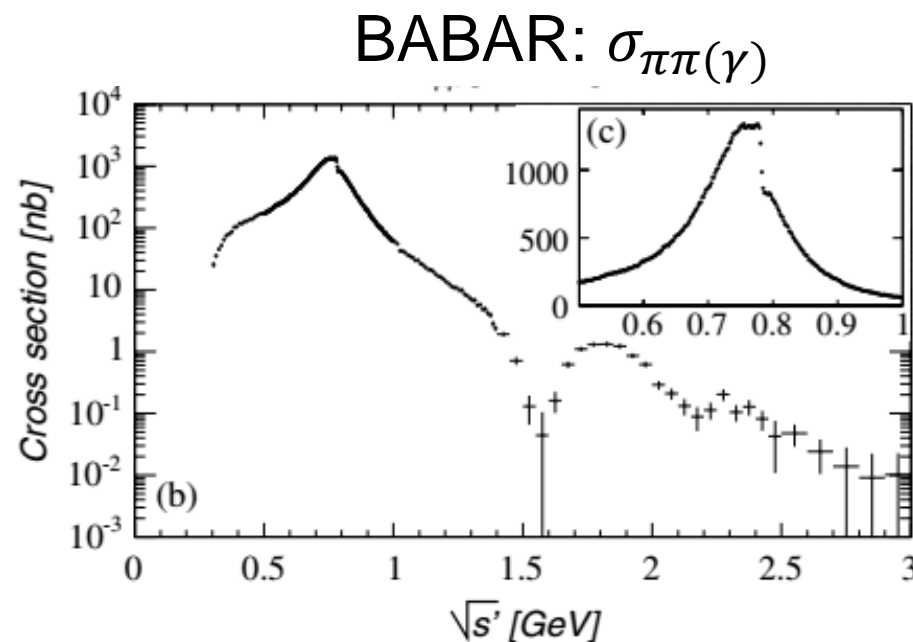
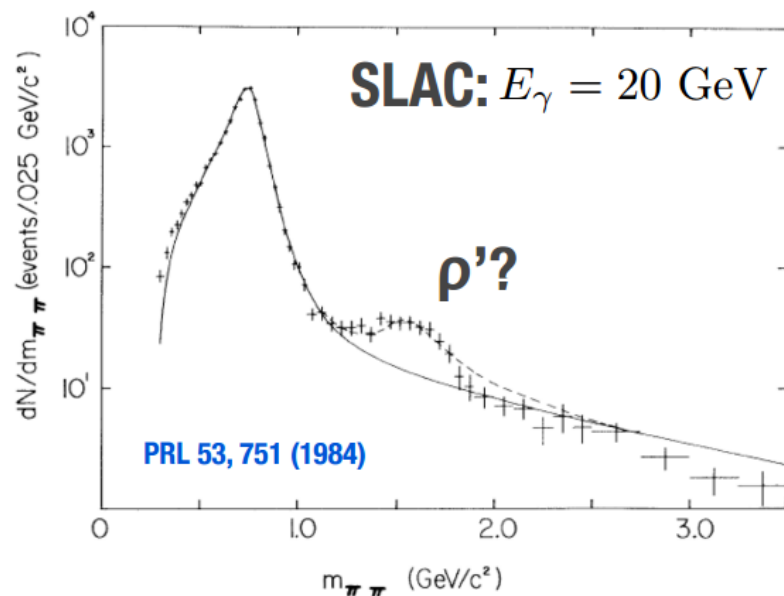




# $\rho$ -like Resonance(s?)

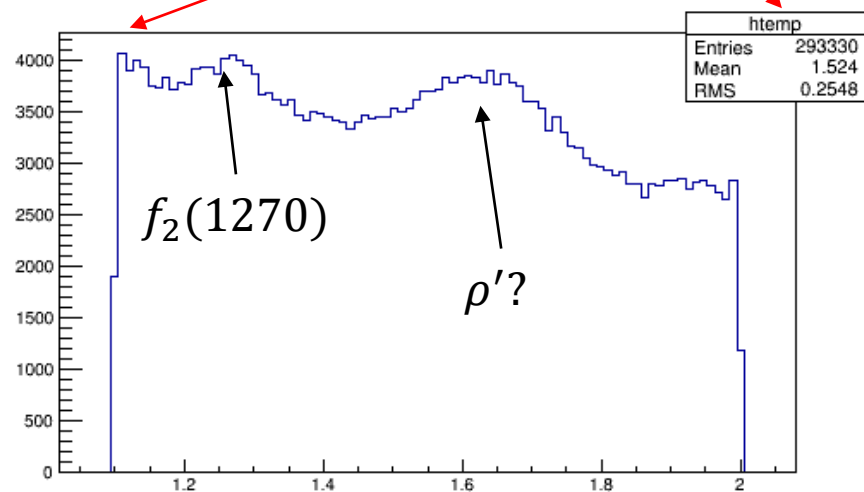
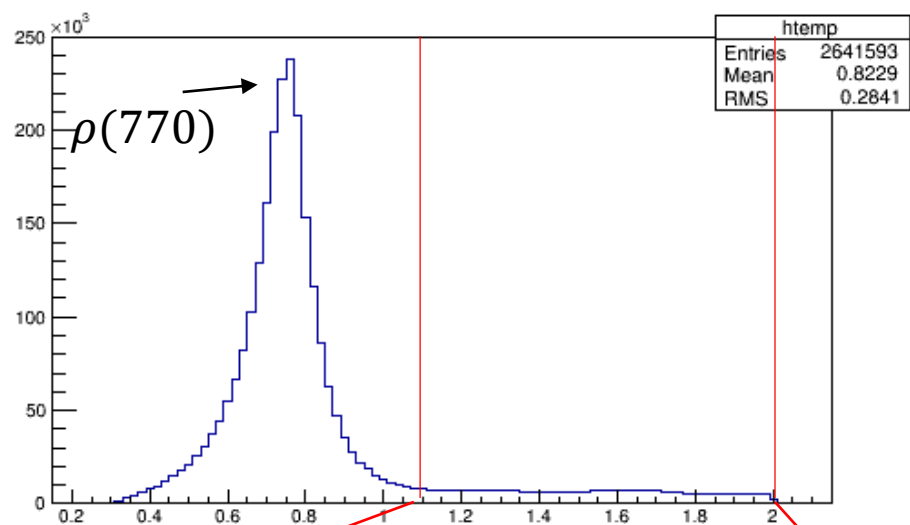
- Seen in photoproduction and  $e^+e^-$  experiments, early as 1984
- PDG now lists two resonances:  
 $\rho(1450)$  and  $\rho(1700)$  (see mini-review)



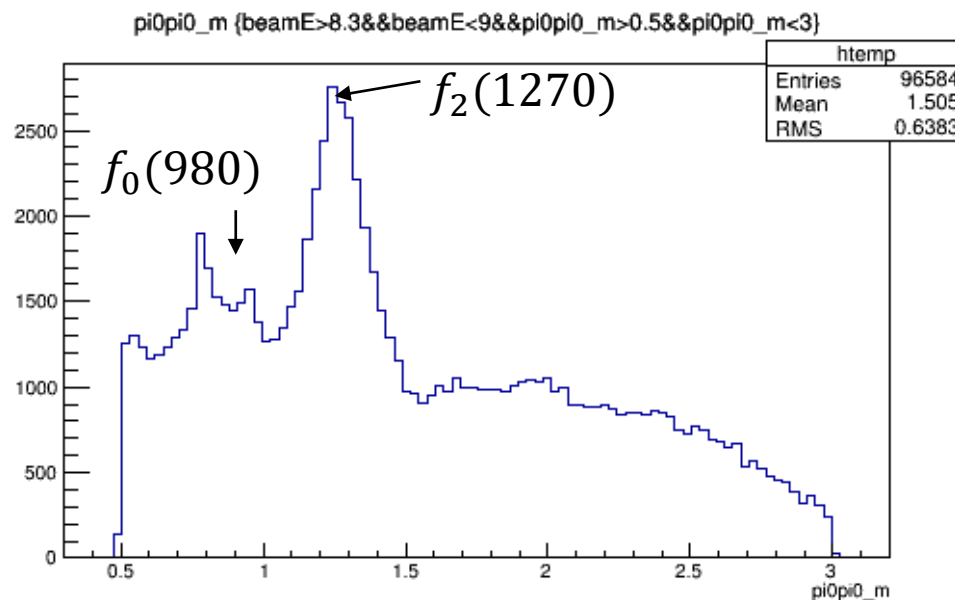


# GlueX: $\pi^+\pi^-$ and $\pi^0\pi^0$ Final States

$\pi^+\pi^-$  Final States



$\pi^0\pi^0$  Final States



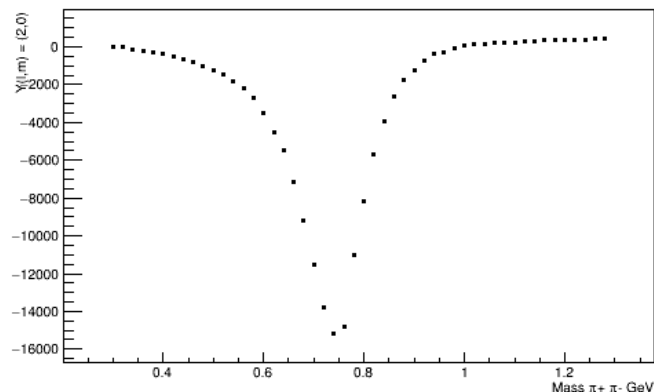
- Lack of  $\sim 1600$  MeV state(s) in  $\pi^0\pi^0$  would imply  $J = 1$  state
- $\pi^0\pi^0$  also serves to constrain background S and D waves by isospin symmetry



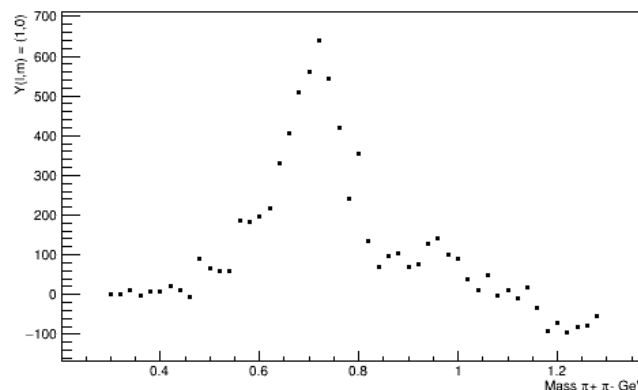
# Moment Sum Analysis

- $\sum_i Y_m^\ell(\theta_i, \psi_i)$  in bins of mass

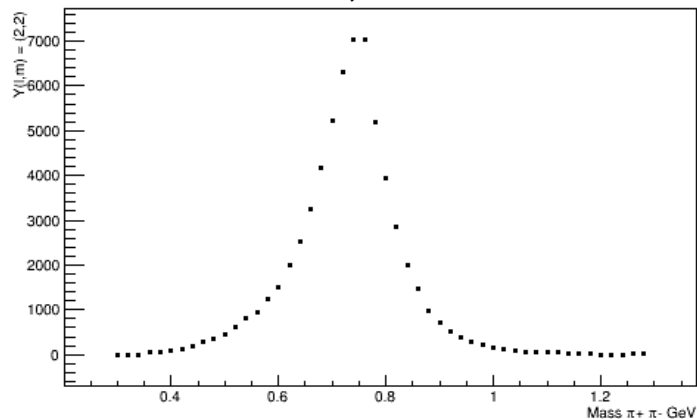
$\ell = 2, m = 0$



$\ell = 1, m = 0$



$\ell = 2, m = 2$



$\ell = 3, m = 0$

