



# RESEARCH PROGRESS

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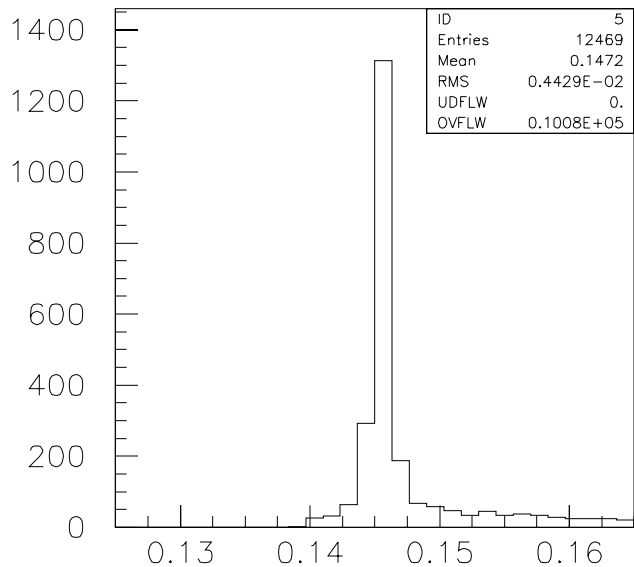
(16 June 2004)



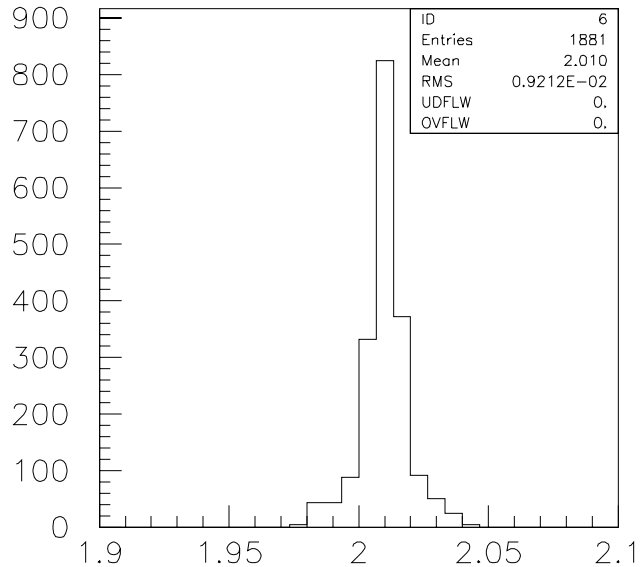
$D^0 \rightarrow K_S^0 \pi \pi$  and  $D^0 \rightarrow (\text{pseudo } K_L^0) \pi \pi$

- ◆ Analysed  $D^0 \rightarrow K_S^0 \pi \pi$  signal MC, 10000 events
- ◆  $K_S^0$  selection :  $z_{\text{dist}} < 1$ ,  $dr > 0.25$ ,  $d\phi < 0.1$ ,  $\Delta M \pm 10 \text{ MeV}$
- ◆  $K^{*-}$  selection :  $\Delta M \pm 75 \text{ MeV}$
- ◆  $D^0$  selection :  $\Delta M \pm 30 \text{ MeV}$
- ◆  $D^{*+}$  selection :  $0.142 < \Delta M < 0.148$  ( $D^0 \rightarrow K_S^0 \pi \pi$ )
- ◆  $D^{*+}$  selection :  $0.14 < \Delta M < 0.15$  ( $D^0 \rightarrow (\text{pseudo } K_L^0) \pi \pi$ )  
Larger solution used for  $\text{pseudo } K_L^0$  momentum, events with -ve D thrown

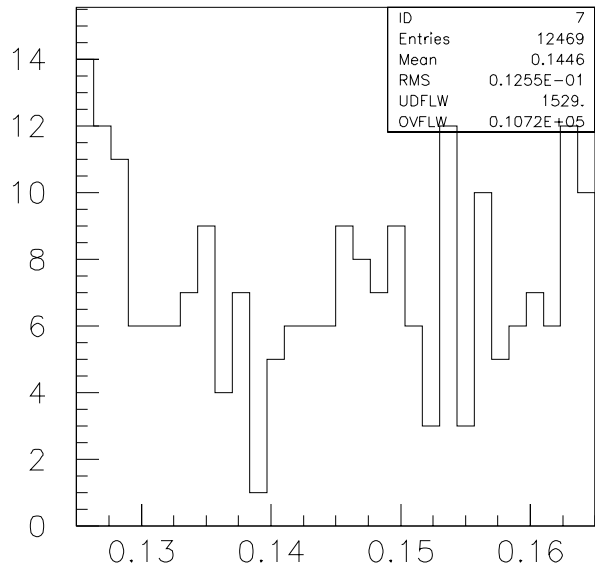
D\*+ Mass



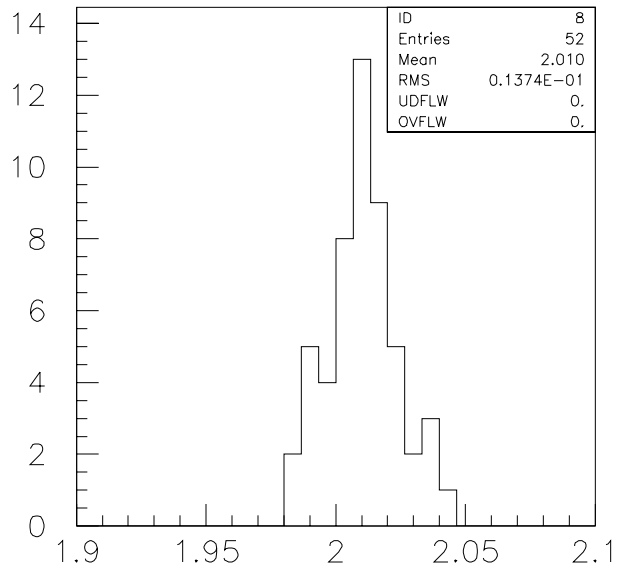
$\Delta m$ ,  $K_s^0 \pi \pi$



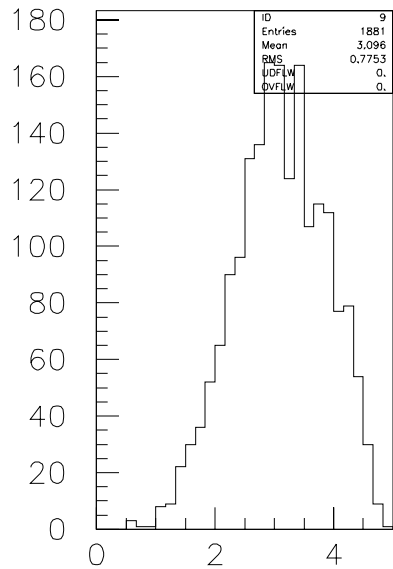
$D^{*+}$  mass,  $K_s^0 \pi \pi$



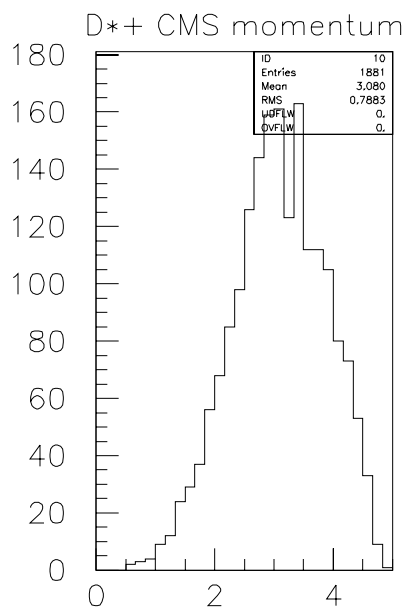
$\Delta m$ ,  $(\text{pseudo}K_{10}) \pi \pi$



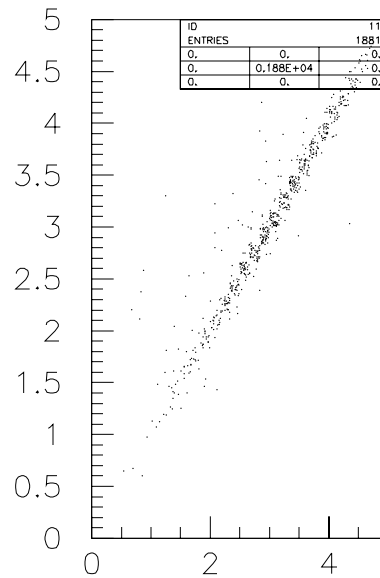
$D^{*+}$  mass,  $(\text{pseudo}K_{10}) \pi \pi$



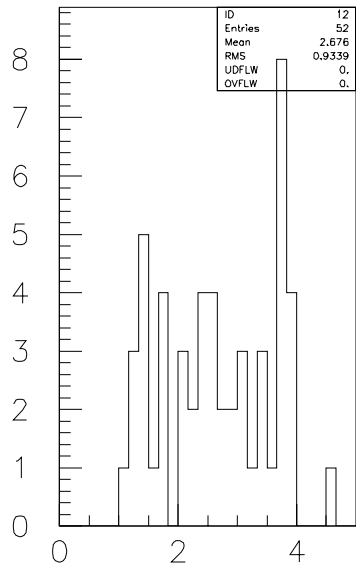
generated, Ks0pipi



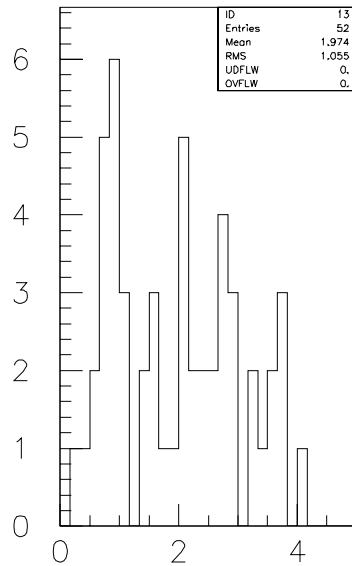
reconst, Ks0pipi



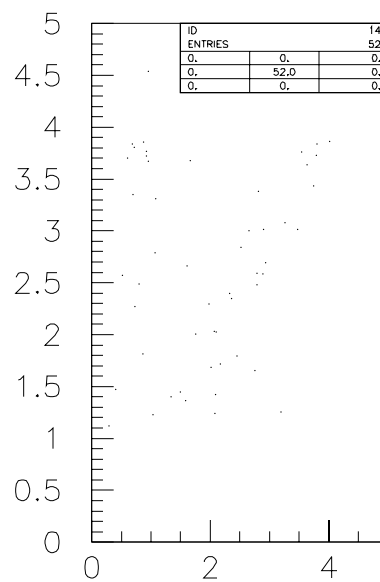
gen. Vs reconst. , Ks0pipi



generated, (pseudoK10)pipi

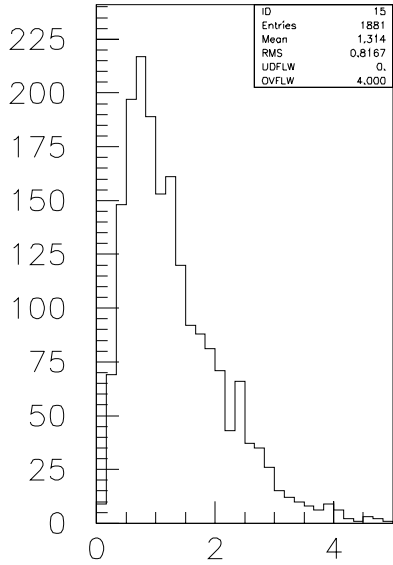


reconst, (pseudoK10)pipi

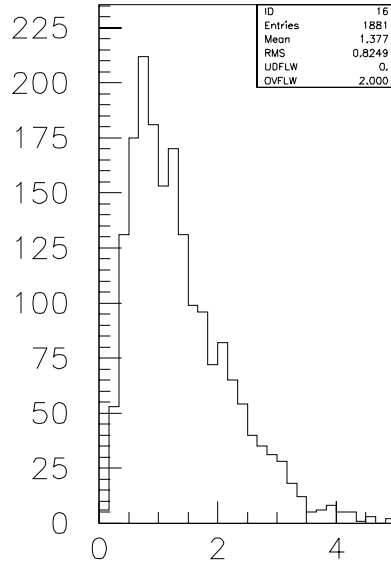


gen. Vs reconst. , (pseudoK10)pipi

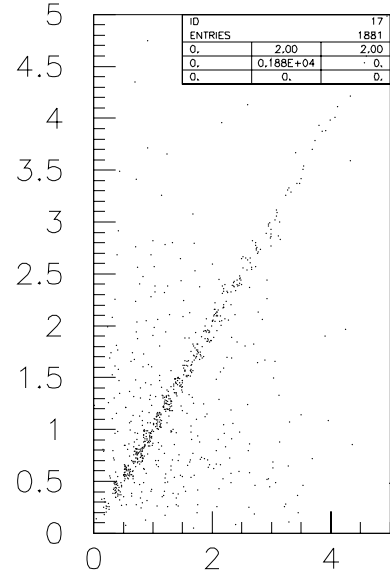
K0 lab momentum



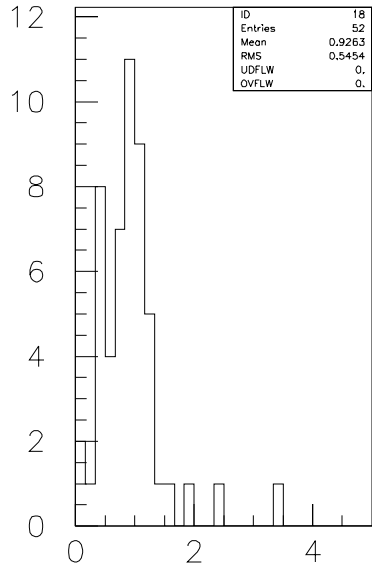
generated, Ks0pion



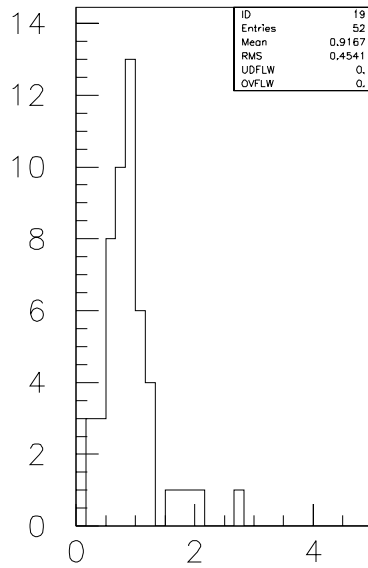
reconst, Ks0pion



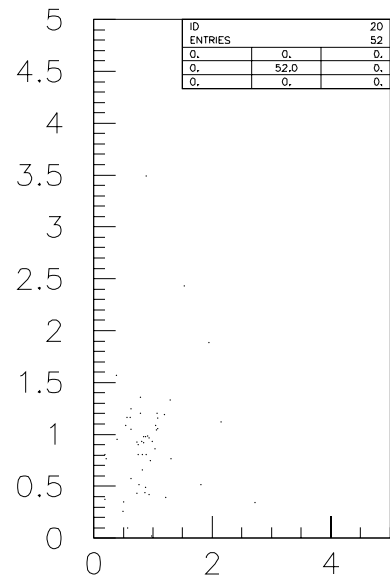
gen. Vs reconst. , Ks0pion



generated, (pseudo-K10)pion



reconst, (pseudo-K10)pion



gen. Vs reconst. , (pseudo-K10)pion