# Report on Recent Work

Ma Hsuning

physics of NKU

April 21, 2014

What Do We Do in the Past Weeks

Choose from at least two charged tracks, identify one of them as K, while another as  $\pi$ . Check the invariant mass of those two

charged tracks and the number of the good charged tracks.

### Works Been Done

#### Particle Identification

We identify charged tracks of K and  $\pi$  via pid, and restrict the condition to :

$$1 \; n_{K^-} * n_{\pi^+} < 1 \; {\sf and} \; n_{K^+} * n_{\pi^-} < 1,$$
 Doing nothing;

2 
$$n_{K^-}*n_{\pi^+}>0$$
 and  $n_{K^+}*n_{\pi^-}<1$ , Write only  $m_{K^-\pi^+}$  into the ROOT file.

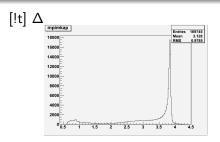
3 
$$n_{K^-}*n_{\pi^+}<1$$
 and  $n_{K^+}*n_{\pi^-}>0$ , Write only  $m_{K^+\pi^-}$  into the ROOT file.

$$4 n_{K^-} * n_{\pi^+} > 0$$
 and  $n_{K^+} * n_{\pi^-} > 0$ ,

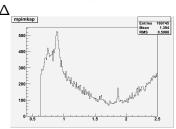
Write both  $m_{K^-\pi^+}$  and  $m_{K^+\pi^-}$  into the ROOT file.



## The Raw Results of Data Been Acquired



Distribution of  $m_{K^+\pi^-}$  from 0.4 to 4.5



### The Raw Results of inclusive MC Been Acquired