

# Time Projection Chamber at SPring-8/LEPS

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We have constructed a Time Projection Chamber (TPC) as the  $4\pi$  detector for hadron photo-production experiments at SPring-8. One of the features of this TPC is to detect low momentum hyperons as close as 16 mm from the target center, especially to detect the decay topology of hyperons such as  $\Sigma$ ,  $\Lambda$  and  $K_s^0$ . The purpose of the experiment is to study the structure of  $\Lambda(1405)$  and the in-medium modification of the properties of vector mesons,  $\phi$  and  $K(890)$ , in a nucleus. The hadron photo-production experiment was carried out in the year 2004 and 2005 with  $\text{CH}_2$ , carbon and copper target and with incident photon energy up to 2.9 GeV. In this presentation we report basic performances of the TPC such as the ability of particle identification by  $dE/dx$  measurement (Figure 1) and the momentum resolution.

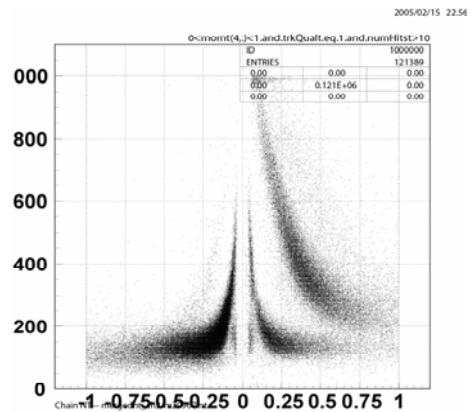


Fig 1:  $dE/dx$  vs momentum\*charge measured by TPC