

Preliminary results of a new study for the missing-mass spectra from reactions $C(p, K^0(\text{short}))$ and $C(p, \Lambda)$ at 10 GeV / c.

Tuesday, 6 September 2011 16:45 (20 minutes)

A missing-mass spectra has been studied for the different channel of reactions as: $p(p, K_s^0)$, $C(p, K_s^0)$, $p(p, pK_s^0)$, $C(p, pK_s^0)$, $p(p, \Lambda)$, $C(p, \Lambda)$, $p(p, K^+) \Lambda$, $C(p, K^+) \Lambda$ and so on. There are statistically small peaks (3-4 S.D.) which are observed by this method on mass range of $K^0(498)$, $\Lambda(1520)$, $\phi(1020)$, $\Sigma(2040)$, 3H , 4He and so on. A good test of the method is observed the well known resonances for $\Sigma^+(1385)$ and $K^{*+}(890)$. Statistically significant peaks were identified from reactions $C(p, pK_s^0)$ and $p(p, \Lambda)\pi^-\gamma$ over a mass range of 11.36 (7.3 S.D.) and 3.2 GeV/c² (6. S.D.), which were interpreted as hyper-nucleus ${}^{12}B$ and $(K^-\text{ppn})$ state predicted from kaon cluster model.

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Session Classification: Poster Session

Track Classification: Strangeness in Matter