

# Measurement of the $\Xi^-p \rightarrow \Lambda\Lambda$ Cross Sections at $p_{\Xi} = 0.2 - 0.8$ GeV/c with a Scintillating Fiber Target

**S.J. Kim<sup>1</sup>, J.K. Ahn<sup>2</sup>, K. Miwa<sup>3</sup>, K. Imai<sup>4</sup>**

<sup>1</sup>Busan Center, Korea Basic Science Institute, Busan 609-735, Republic of Korea

<sup>2</sup>Department of Physics, Korea University, Seoul 136-713, Republic of Korea

<sup>3</sup>Department of Physics, Tohoku University, Sendai 980-8578, Japan

<sup>4</sup>JAEA/J-PARC

To understand the hyperon-nucleon interaction, the experimental and theoretical approaches were carried out many years ago in  $S = -2$  sector[1,2]. And a series of theoretical results for the  $\Xi^-p \rightarrow \Lambda\Lambda$  were reported. On the other hand, experimental data are very scarce below 1 GeV/c  $\Xi^-$  beam from  $(K^-, K^+)$  reaction. The  $\Xi^-$  particle has the short lift time, there was no data to explain the  $\Xi^-p \rightarrow \Lambda\Lambda$  cross-section especially at low energies. In KEK-PS E522 experiment, we first report the cross-section result of  $\Xi^-p \rightarrow \Lambda\Lambda$  reaction in the  $p_{\Xi^-}$  momentum range  $0.2 \sim 0.8$  GeV/c using an active scintillating fiber target. And we will compare the these result with old expeimental result of KEK-E244 and newly reported theoretical model for the Hyperon-Nucleon estimations[3-7].

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