

## Contribution submission to the conference Freiburg 2008

**A Measurement of  $K^*(892)^\pm$  +/- Production in Deep Inelastic Scattering at H1** — •DENIZ SUNAR — University of Antwerp, Antwerp, Belgium

A measurement of the  $K^*(892)^\pm$  vector mesons observed through the decay chain  $K^*(892)^\pm \rightarrow K_s^0 \pi^\pm \rightarrow \pi^+ \pi^- \pi^\pm$  is presented. The measurement of the light vector mesons gives the direct information about the suppression factor for the strange quark pair production. The study of  $K^*(892)^\pm$  has been made by different experiments but with high statistical and systematic uncertainties. With a large number of hadronic events at the H1 experiment an accurate analysis can be performed. The large data sample is particularly important for the understanding of the mass spectrum.

The analysis is based on the data taken in the 1999-2000 and 2005-2006 running periods with an integrated luminosity of about  $298 \text{ pb}^{-1}$ . Several selection criteria are applied in order to select the decay channel of  $K^*$ . The phase space of the event has been restricted to  $4 < Q^2 < 100 \text{ GeV}^2$ ,  $0.1 < y < 0.6$  and  $-1.5 < \eta_{(K^*)} < 1.5$ . The main step in the selection process is the identification of  $K_s^0$  mesons decaying into  $\pi^+ \pi^-$ . In the present analysis the mass of the  $K^*$  is reconstructed as  $890.71 \pm 0.31 \text{ MeV}/c^2$  which is consistent with the world average value  $891.66 \pm 0.26 \text{ MeV}/c^2$ .

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