

Abstract Submitted
for the DNP11 Meeting of
The American Physical Society

Comparison of kaon and pion valence quark distributions in a statistical model¹ MARY ALBERG, Seattle University, University of Washington — We have calculated the Bjorken- x dependence of the kaon and pion valence quark distributions in a statistical model. Each meson is described by a Fock state expansion in terms of quarks, antiquarks and gluons. Although the pion valence quark distributions have been determined by Drell-Yan experiments, the kaon valence quark distributions have only been deduced from the measurement of the ratio $\bar{u}_K(x)/\bar{u}_\pi(x)$ by Badier et al. [1]. We show that, using no free parameters, our model is in good agreement with the decrease of this ratio with increasing x .

[1] J. Badier et al., Phys. Lett. B 93 (1980) 354.

¹This research has been supported in part by the Research in Undergraduate Institutions program of the National Science Foundation, Grant No. 0855656.

Mary Alberg
Seattle University, University of Washington

Date submitted: 28 Jun 2011

Electronic form version 1.4