Abstract Submitted
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Strangeness asymmetry in the proton sea[1] MARY ALBERG, Seattle University and University of Washington — Meson cloud models describe the proton sea in terms of fluctuations of the proton into meson-baryon pairs. The leading contributions to proton strangeness are from states which contain a kaon and a Lambda or Sigma hyperon. We use a Fock state expansion of the proton in terms of these states to determine the strangeness distributions of the proton in a convolution model, in which the fluctuations are represented by meson-baryon splitting functions, which determine the total strangeness of the proton. Strangeness asymmetry, the difference between momentum distributions of the s and sbar quarks in the proton, arises because the quarks are constituents of different hadrons. For the parton distributions of the s(sbar) quarks in the bare baryons(mesons) of the Fock states, we use light cone wave functions or our statistical model, which expands the bare hadrons in terms of quark-gluon states. We show that strangeness asymmetry depends strongly on the parton distributions used for the hadrons in the cloud. We compare our results to NuTeV and to global parton distributions.

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