

Abstract Submitted  
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**An examination of meson versus baryon production in different size collision systems** ROBERT CERNAK, Univ of Michigan - Ann Arbor — Quark and gluon hadronization to observable bound states is a process that is not yet fully understood. However, recent high-statistics, multidifferential experimental measurements enable much more detailed studies than previously possible. Interesting differences have been observed in the ratios of baryon to meson production in various collision systems, particularly as a function of transverse momentum. A compilation and analysis of recent results from proton-proton, deuteron-nucleus, and nucleus-nucleus collisions is presented. Identified hadron production in lepton-nucleus collisions is also examined and compared to the hadronic collision data. The comparisons suggest that there may be an additional mechanism for hadronization within certain kinematic regimes in the presence of nuclei, beyond traditionally considered “vacuum fragmentation” parameterized by fragmentation functions.

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