Abstract Submitted
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Nuclear modifications and parton fragmentation functions in d+Au collisions[1] ADEOLA ADELUYI, GEORGE FAI, Kent State University — We compare nuclear modification factors calculated with different shadowing parameterizations and different fragmentation functions to each other and to BRAHMS data. This is important to assess the robustness of perturbative QCD (pQCD) calculations and the ability of various models to describe tha data. Calculations based on the Color Glass Condensate picture and on k_T-factorized pQCD models were checked against these data by different groups earlier. We find that the applied fragmentation function parameterizations have a significant effect on the results, while shadowing parameterizations and parton distribution functions have relatively little effect. The role of different deuteron wave functions is also studied. Unfortunately, the reach of available data in p_T has little overlap with the region where pQCD is applicable. The difference between the data and pQCD calculations becomes more pronounced at forward rapidities.

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