Nuclear Attenuation of Hadrons at HERMES

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The influence of the nuclear environment on the hadronization of charged pions, kaons and (anti)protons in semi-inclusive deep inelastic scattering has been studied by the HERMES experiment at DESY using a 27.5 GeV positron beam. The identified hadron multiplicity has been measured for helium, neon and krypton relative to that of deuterium as a function of ν, z and p_T^2. The large increase of multiplicity ratios with p_T^2 were observed, clarifying the role of FSI in the nuclear transverse momentum broadening. Also, the doublehadron production in the nuclear medium was investigated. The nuclear effects on the double hadron-production ratio provided an additional tool for studying modifications of hadronization in nuclear matter.

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[3] HERMES Coll., A. Ajrapetian et al., Phys. Lett. B577(2003) 37.
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