

Abstract Submitted
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Investigation of the In-Medium Kaon-Nucleon Interaction

MICHAEL WOOD, Canisius College, CLAS COLLABORATION — One method to study the strong interaction inside of the nucleus is with the absorption of hadrons. The E01-112 experiment in Hall B at the Thomas Jefferson National Accelerator provided data on the photo-production of the K_s^0 in nuclei of deuterium, carbon, iron, and lead. The kaon is interesting since the antikaon-nucleon potential is attractive, leading to predictions of strangeness in a dense environment like a neutron star. On the other hand, the kaon-nucleon potential is repulsive, indicating that kaons should traverse the medium with fewer interactions. The absorption of the K_s^0 by a bound nucleon inside a nucleus will indicate how the potential changes; is it strengthened or weakened in the medium. In this talk, I will present preliminary transparency ratios versus mass number.

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