Abstract Submitted
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Monte Carlo Eikonal Scattering W.R. GIBBS, New Mexico State University, J.-P. DEDONDER, Université Paris Diderot-Paris 7 — Eikonal multiple scattering theory in the form of the Glauber model is believed to be accurate for high-energy elastic scattering of heavy-ion systems. The evaluation of the full expression has only been done for the lightest systems with recourse often being made to an optical model model approximation. We evaluate the full expression without further approximation using a Monte Carlo representation of the nuclear density including the center-of-mass and Coulomb corrections. The center-of-mass correction remains very important for all nuclei investigated. The input to these calculations is the basic NN amplitude, characterized by four parameters, and the nuclear density. We have made calculations of a number of cases of elastic scattering using NN parameters taken from the VPI/GWU fits. Results of several calculations will be shown and compared with data.

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