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Medium Effects in Nuclear Direct Reactions[1] MESUT KARAKOC[2], CARLOS BERTULANI, Department of Physics and Astronomy, Texas A&M University-Commerce, Commerce, Texas 75429-3011, USA — I will discuss the effects of medium corrections in direct reactions at intermediate energies, above 50 MeV/nucleon. We have used the t-rho-rho microscopic method to deduce optical potentials based on an effective nucleon-nucleon (NN) cross section. As elastic scattering data at intermediate energies are scarce, knockout reactions are used for the purpose. Our results are compared with those obtained with free NN cross sections. We show that medium effects may lead to sizable modifications for collisions at intermediate energies and that they are more pronounced in reactions involving weakly bound nuclei.

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