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Investigation of dp backward elastic scattering at GeV-energies

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The deuteron-proton elastic scattering process is considered in the relativistic expansion framework. Four reaction mechanisms are taken into account: one-nucleon exchange, single-scattering, double-scattering terms, and term with delta-isobar in the intermediate state. Each of these mechanisms contributes into the reaction amplitude. The calculations for the differential cross section and a number of polarization observables are performed in a GeV-energy range for the special case when the scattering angle is equal to 180 degrees in the center of mass. The results are given for various deuteron wave functions: Paris, CD Bonn, and Gross.

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