

NUCLEUS-NUCLEUS POTENTIAL WITH REPULSIVE CORE AND ELASTIC SCATTERING. PART 1. NUCLEUS-NUCLEUS INTERACTION POTENTIAL

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Various approaches for nucleus-nucleus interaction potential evaluation are discussed in details. It is shown that the antisymmetrization of nucleons belonging to different nuclei and the Pauli principle give the essential contribution into the nucleus-nucleus potential at distances, when nuclei are strongly overlapping, and lead to appearance of the repulsive core of nucleus-nucleus interaction at small distances between nuclei.

Keywords: nucleus-nucleus interaction potential, antisymmetrization of nucleons, Pauli principle, repulsive core.