Neutron-deuteron scattering in configuration space

VLADIMIR SUSLOV, MIKHAIL BRAUN, BRANISLAV VLAHOVIC, North Carolina Central University, Durham NC, 27707 — A new computational method for solving the configuration-space Faddeev equations for the breakup scattering problem [1] has been applied to consider $nd$ scattering both below and above two-body threshold. To perform numeric calculations for arbitrary nuclear potential and with arbitrary number of partial waves retained, we use approach proposed in [2]. The calculations of the inelasticity and phase-shift, as well the breakup amplitudes for $nd$ scattering for various lab energies were performed with the charge independent AV14 potential. The results are compared with those of Bochum and Pisa group [3].


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