Neutron-deuteron scattering in configuration space II[1] VLADIMIR
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Central University — A new computational method to solve the configuration-space
Faddeev equations for the breakup scattering problem [1] has been applied to study
the elastic nd scattering above the deuteron threshold. To perform numerical calcu-
lations for arbitrary nuclear potentials and with arbitrary numbers of partial waves
retained, we use the approach proposed in [2]. Calculations of the elastic differential
cross section, nucleon and deuteron analyzing powers for lab energy 14.1 MeV were
performed with the charge independent AV14 potential. To compute the observ-
ables, the maximum value for the total momentum j of a nucleon pair was chosen
equal to 3 and all values of the conserved total three-nucleon angular momentum up
to 13/2 with both signs of parity were taken into account. The results are compared
with those of the Bochum group.

[1] V.M. Suslov and B. Vlahovic, Phys. Rev. C**69**, 044003 (2004).
[2] S.P. Merkuriev, C. Gignoux and A. Laverne, Ann. Phys. **99**, 30 (1976).

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