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# Time-dependent description of nucleons transfer in 40Ar+Ag reaction

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A numerical solution of the time-dependent Schrodinger equation [1, 2] is applied in studying the dynamics of the the nucleons and the alpha-clusters transfer in the reaction $^{40}$Ar+$^{nat}$Ag at energy 285 MeV. The evolution of wave functions for outer nucleons is used to describe multi-neutron and multi-proton transfer channels. In addition the evolution of the alpha-cluster wave function in the $^{40}$Ar nucleus is used to calculate the cross sections for S and Si products formation. The results of the calculations are in satisfactory agreement with experimental data [3,4] for few nucleons transfer in quasi-elastic scattering. The nucleon collectivization model for di-nuclear system [4] is modified using time-depended approach.

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