

# Non-stationary approach to description of neutron transfer in reactions with ${}^3,6,8\text{He}$ nuclei

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Experimental cross sections for formation of isotopes  ${}^{44,46}\text{Sc}$  in reactions  ${}^3,6\text{He} + {}^{45}\text{Sc}$  [1,2],  ${}^{65}\text{Zn}$  in reaction  ${}^6\text{He} + {}^{64}\text{Zn}$  [3] and  ${}^{196,198}\text{Au}$  in reactions  ${}^3,6,8\text{He} + {}^{197}\text{Au}$  [4-6] have been analyzed. To calculate neutron transfer probabilities and cross sections the time-dependent Schrödinger equation (TDSE) [7,8] for external neutrons of  ${}^3,6,8\text{He}$  and target nuclei has been solved numerically. The contribution of fusion-evaporation processes to the experimental data has been taken into account within the statistical model. The results of calculation demonstrate overall satisfactory agreement with experimental data.

## References

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