

Abstract Submitted
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Effects of electron correlation and second-order terms in transfer-excitation process ALEXANDER GODUNOV, ANA SAMOLOV, Old Dominion University, Norfolk VA — The effects of electron correlation and second-order terms on theoretical cross sections of transfer excitation in collisions of the helium atom with fast H^+ and He^{2+} ions are studied. The differential cross sections as a function of the scattering angle are calculated using highly correlated wavefunctions with expansion of the transition amplitude in the Born series through the second order. The results of these calculations are compared with recent experimental data for H^+ impact.

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