

Abstract Submitted
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Theoretical Fully Differential Cross Sections for Transfer-Excitation Collisions A.L. HARRIS, M. SCHULZ, J.L. PEACHER, D.H. MADISON, Missouri University of Science and Technology — Theoretical fully differential cross sections (FDCS) will be compared with experimental results for transfer-excitation occurring in proton-helium collisions. In the experiments, the incident proton captures one electron from a helium atom, and the remaining electron is left an excited bound state of the helium ion. The theoretical approach we use is a full four-body approach, taking each particle and interaction into account. The calculations will address the effects of the projectile-target atom and projectile-residual ion interactions, as well as electron correlation.

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