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Laser assisted charge transfer in He^{++}+H collisions[1] FATIMA ANIS, V. ROUDNEV, R. CABRERA-TRUJILLO, B. D. ESRY, J.R. Macdonald Laboratory, Department of Physics, Kansas State University — We present a study of He^{++}+H collision in the presence of linearly polarized laser field. We performed three dimensional calculations in the semi-classical impact parameter approximation. A remarkable enhancement of four to five fold in the capture cross section is seen even for a moderate intensity of 3.5×10^{12}W/cm^2. Our results are for linearly polarized light both perpendicular and parallel to the collision plane. We focus on the parameters easily accessible in the laboratory and discuss the possibility of performing such an experiment.

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