

# IONIZATION OF He BY SLOW PROTONS<sup>1</sup>

*P. S. Krstić, D. R. Schultz, and G. Bent<sup>2</sup>*

The recently developed method of multi-electronic hidden crossings is used to describe the ionization of He by proton impact. Single ionization is satisfactorily described by taking into account only single excited configurations within a fully correlated, molecular structure configuration interaction calculation of the electronic eigensurfaces in the plane of complex internuclear distance. However, a significant role is played by doubly excited states in double ionization. Within this theoretical framework, the single-ionization mechanism is found and described by a series of hidden crossings. A comparison with measurements and other theoretical approaches is given.

- 
1. Abstract of published paper: *J. Phys. B* **31**, 183 (1998).
  2. University of Connecticut, Storrs, CT.