

Abstract Submitted  
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**Application of the Hyperspherical Hidden Crossing Method to Near-Threshold Positron-Hydrogen Ionization**<sup>1</sup> KRISTA JANSEN, S.J. WARD, University of North Texas, J.H. MACEK, University of Tennessee, J. SHERTZER, College of the HolyCross — We have applied the hyperspherical hidden crossing method [1] to compute the S-wave cross section for near-threshold  $e^+$ -H ionization. We confirm the second order correction terms to the Wannier threshold law that were previously derived [2]. The small S-wave cross section is due to destructive interference between the two amplitudes that correspond to different paths leading to Ps formation.

[1] J. H. Macek and S. Yu.Ovchinnikov, Phys. Rev. A **54**, 544 (1996).

[2] W. Ihra, J. H. Macek, F. Mota-Furtado and P. F. O'Mahony, Phys. Rev. Lett. **78**, 4027 (1997), James Sternberg, S. J. Ward, J. H. Macek and J. Shertzer, Bull. Am. Phys. Soc. **49**, no.3, p.52 (2004).

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