

Abstract Submitted
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High-lying P-wave resonances in PS-H scattering below the $p+Ps^-$ threshold¹ ZONG-CHAO YAN YAN, University of New Brunswick, Y.K. HO, Institute of Atomic and Molecular Sciences, Academia Sinica — Here, we present a calculation of P-wave resonances lying below the $p + Ps^-$ threshold by using the method of complex- coordinate rotation [1]. The present work is a continuation of our recent investigation of high-lying S-wave resonances in Ps- H scattering below the same $p+Ps^-$ threshold [2]. Using elaborate Hylleraas wave functions in which all the six inter- particle coordinates are included [3], resonance energies and widths for several lower members of a Rydberg series are calculated. At the meeting, we will compare our results with those of an earlier calculation [4].

[1] Y. K. Ho, Phys. Rept. 99, 1 (1983), and references therein.

[2] Z.-C. Yan and Y. K. Ho, Phys. Rev. A 77, 030701 (2008).

[3] Z.-C. Yan and G. W. F. Drake, J. Phys. B. 30, 4723 (1997).

[4] J. Di Rienzi and R. J. Drachman, Phys. Rev. A 76, 032705 (2007).

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