

Abstract Submitted
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Long-range interaction between ground and excited state hydrogen atoms¹ DANIEL VRINCEANU, ALEX DALGARNO, ITAMP Harvard-Smithsonian CfA — The asymptotic expansion at large distances is obtained for the interaction between a ground state hydrogen atom and an excited hydrogen atom with principal quantum number $n = 2, \dots, 10$. A degenerate perturbation theory up to the second order is employed to obtain accurate results. The asymptotic representation for several special cases is found in the limit of large quantum number n .

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