

Kinetic Energy Matrix Elements for a two-electron Atom with Extended Hylleraas-CI Wave Function

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Received : 1.12.17 ; Revised : 22.12.2017 ; Accepted : 22.01.18

Abstract : Some typical kinetic energy integrals which arise in the application of extended Hylleraas-configuration interaction (E-Hy-CI) function in the framework of Rayleigh-Ritz method of variation, have been evaluated analytically for two-electron atomic systems. Closed-form expressions for the corresponding integrals which occur in the application of Hylleraas-CI functions, have been derived as special cases.

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