Energy Calculation for Excited Lithium Atom in Position Space

Authors : Khalil H. Al-Bayati, Khalid Omar Al-Baiti

Abstract : The energy expectation value $\langle E \rangle$ for Li-like ions systems (Li, Be+ and Be2+) hasbeen calculated and examined within the ground state $(1s2s\alpha)^2$ S and the excited state $(1s3s\alpha)^2$ S in position space. The partitioning technique of Hartree-Fock (H-F) has been used for existing wavefnctions.

Keywords : energy expectation value, atomic systems, ground and excited states, Hartree-Fock approximation

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