

PERIODIC NUMERICAL SOLUTIONS OF THE TIME-DEPENDENT HARTREE–FOCK EQUATIONS¹

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A numerical algorithm is proposed for finding periodic solutions of the time-dependent Hartree–Fock equations. It is shown that this algorithm preserves the particle number and the total energy exactly. The method is demonstrated by calculating the periodic breathing mode of ⁴He. The generalization to more realistic cases is discussed, including multidimensional periodic modes.

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