

Abstract Submitted
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The linear stability of the principle relative equilibria in the Coulomb $(n + 1)$ body problem CHARLES JAFFE, Department of Chemistry, West Virginia University, JOHN E. MARTIN, III, Department of Mathematics, West Virginia University — The linear stability of the principle relative equilibria of the Coulomb $(n + 1)$ -body problem is studied. The n particles are the electrons having a charge of -1 and the $(n + 1)^{th}$ particle is the nucleus having a positive charge Z equal to the atomic number. The mass of the nucleus is over three orders of magnitude greater than that of the electrons. Treating the n electrons as identical particles allows the introduction of symmetry variables. This block diagonalizes the Jacobian matrix and consequently factors the characteristic polynomial.

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