**Invited Talk**

**Lower bound to the energy of complex atoms**

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There are methods available for calculating rather precise lower bounds for the energy of simple atoms or molecules. If complex atoms or molecules are to be investigated, these methods become inapplicable, or impracticable. Here we propose a new method which, for the above cases, promises to become as accurate as the Hartree-Fock procedure for the upper bound. Although applicable to a wider class of problems, we shall demonstrate it for an atom with *N* electrons.

**References**

1. T. Tietz, *J. Chem. Phys.* 25, 787 (1956).
2. R. O. Mueller, A. R. P. Rau, and L. Spruch, *Phys. Rev. A* 8, 1186 (1973).

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