

Abstract Submitted  
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**Calculating Properties of Finite Mass Atoms** STEVEN ALEXANDER, Southwestern University, R.L. COLDWELL, Retired — Most atomic calculations assume that the mass of the nucleus is finite. If one is interested in evaluating atomic properties to high precision then this approximation cannot be made. We have developed a simple method that includes the kinetic energy of the nucleus into atomic calculations and does not increase the time or the complexity of these calculations. Our results for a variety of properties for several different atoms will illustrate some of the advantages of this method.

Steven Alexander  
Southwestern University

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