

Meeting: 1002, Pittsburgh, Pennsylvania, AMS CP 1, Session for Contributed Papers

1002-70-5 **Lia Leon Chachanidze-Margolin*** (liamar99@aol.com), University of Phoenix, Jersey City
Campus, NJ. *Development of The Phase Function Method for Systems of N Charged Particles.*

The Hyperspherical Function Method is used to investigate N-particle systems with Strong and Coulomb Interactions. The Phase Function Method (PFM) is generalized for systems of N charged particles. N-Particle Coulomb Functions are found.

The equations, allowing to find the bound state energies of N-body systems with Coulomb Interactions are obtained. N-Particle Coulomb functions are presented in the form of linear combinations of Whittaker Functions and corresponding coefficients are determined from asymptote.

The phase functions for the description of systems with Coulomb and Nuclear Interactions are introduced and their asymptotes in the lowest harmonic approximation for fixed quantum numbers are obtained. (Received February 02, 2004)