

Abstract Submitted  
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**Mean Field Corrections in the Hadron Resonance Gas** NICHOLAS CASSAR, THOMAS KLAEHN, GRANT ROBERTS, California State University, Long Beach — We investigate the thermodynamic properties of hot and dense nuclear matter by modeling it as an ensemble of ideal particles, the hadron resonance gas (HRG). The relativistic energy per particle is dependent on mass, and in medium we have nucleons of varying mass. Additionally, corrections are added to the ideal case for particle size and interactions. We go over results using the Walecka model for nucleons in medium to show these corrections.

Nicholas Cassar  
California State University, Long Beach

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