



Contribution ID: 50

Type: Poster

A covariant interacting Hadron-Resonance Gas model

Monday, 21 May 2018 18:30 (0 minutes)

The Hadron-Resonance Gas (HRG) approach - used to model hadronic matter at small baryon potentials μ_B and finite temperature T - is extended to finite and large chemical potentials by introducing interactions between baryons in line with relativistic mean-field theory defining an interacting HRG (IHRG). Using lattice data for $\mu_B = 0$ as well as information on the nuclear equation of state at $T = 0$ we constrain the attractive and repulsive interactions of the IHRG such that it reproduces the lattice equation of state at $\mu_B = 0$ and the nuclear equation of state at $T = 0$ and finite μ_B . The formulated covariant approach is thermodynamically consistent and allows to provide further information on the phase boundary between hadronic and partonic phases of strongly interacting matter by assuming constant thermodynamic potentials.

Primary author: Mr STEINERT, Thorsten (JLU Giessen)

Co-author: Prof. CASSING, Wolfgang (Giessen University)

Presenter: Mr STEINERT, Thorsten (JLU Giessen)

Session Classification: Poster Session