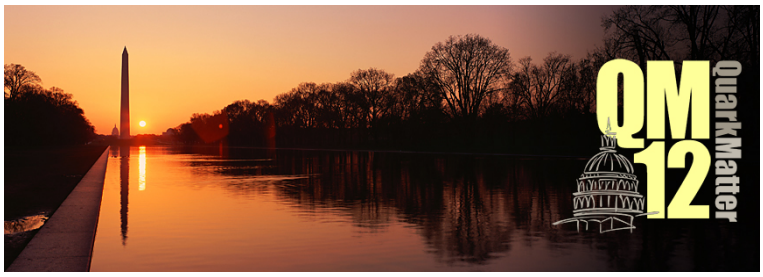

Contribution ID: **126** Type: **Poster**

The Hadron Resonance Gas at the Boundary of the Hadronic World

Thursday 16 August 2012 16:00 (2 hours)

We investigate the impact of interactions in the hadron resonance gas (HRG) modelled by a volume assigned to the hadrons in a thermodynamically consistent way. We discuss the influence of the hadron radius, a parameter of the model, on thermodynamic quantities as energy density, entropy density and pressure. The consideration of interactions is followed by us arguing that the commonly used free HRG is not an appropriate description in the dense environment near the phase boundary/rapid cross-over and shows in this region clear signs of the Hagedorn divergence. This is tamed in our model including interactions, so that we associate the strong rise of the thermodynamic quantities observed in recent lattice quantum chromodynamics calculations with deconfinement.

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