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## A state of the art lattice-QCD + Hadron-Resonance Gas Equation of State

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We present a state of the art QCD Equation Of State (EOS) in the limit of vanishing baryon density. Continuum-extrapolated lattice-QCD data with realistic quark masses by the Budapest-Wuppertal collaboration are employed in the high-temperature regime and are joined to a Hadron-Resonance Gas (HRG) EOS at lower temperatures. Since experimental data from heavy-ion collisions suggest that particle ratios are frozen before kinetic freeze-out, with two different temperatures describing the particle yields and the slope of  $pT$ -spectra, we offer the user the possibility of employing both a Chemical Equilibrium EOS and a more realistic Partial Chemical Equilibrium one, with resonant reactions allowed in the hadronic phase but with particle ratios fixed at the chemical freeze-out temperature.

Parametrizations of the various thermodynamic quantities are offered to the user so that the whole setup can be easily implemented into existing hydrodynamic codes. A snapshot of preliminary results at non-vanishing baryon density will be possibly displayed.

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