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# The equation of state of strongly interacting matter and the consequences for transport approaches

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The equation of state (EoS) of strongly interacting matter for finite chemical potentials cannot be calculated from first principles (lattice QCD) so one have to rely on effective theories like the Polyakov-Nambu-Jona-Lasinio model. Recently it has been shown that they can reproduce the lattice calculations at vanishing chemical potential and provide therefore a solid basis for the extrapolation to finite chemical potentials. The knowledge of the EoS at finite chemical potentials is necessary to understand neutron stars, neutron star collisions but also relativistic heavy ion collisions. We present the current status of this development and discuss the consequences for transport approaches.

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