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Cool quark matter

Thursday 28 April 2016 15:20 (20 minutes)

I will report results from recent efforts in perturbative QCD to build a framework for dealing with the bulk thermodynamic properties of dense quark matter at small but nonzero temperatures. The new results extend the applicability of the current state-of-the-art Equation of State of zero-temperature quark matter, smoothly connecting it to that of hot quark-gluon plasma. Applications of the new EoS to phenomenological neutron star calculations will be discussed as well, as will the prospects of extending the calculations to further orders in the weak coupling expansion.

Presenter: VUORINEN, Aleksi Session Classification: Afternoon session