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The fluidity of hot interacting hadrons flowing out of chemical equilibrium

The ratio η/s of the shear viscosity, η, and the entropy density, s, of hot interacting hadrons is calculated using the Chapman-Enskog and virial expansion methods. Interactions are parametrized using the K-matrix which preserves the unitarity of the S-matrix. In the four component mixture $\pi - K - \eta - N$, 57 resonances up to 2 GeV are included. Increasing number of resonances is shown to reduce η and increase s resulting in a progressive decrease of η/s for temperatures close to the QCD
phase transition temperature. The addition of finite chemical potential reduce the value of η/s even more in the comparison with zero chemical potential.
Prospects of hot hadrons becoming a "perfect"fluid are discussed.

Primary author: Dr WIRANATA, Anton (CCNU)

Co-authors: Prof. PRAKASH, Madappa (Ohio University); KOCH, Volker (LBNL); WANG, Xin-Nian (Lawrence Berkeley National Lab. (US))

Presenter: Dr WIRANATA, Anton (CCNU)