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Electrical conductivity and thermal dilepton rate from quenched lattice QCD.

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We report on a continuum extrapolation of the vector current correlation function for light valence quarks in the deconfined phase of quenched QCD. This is achieved by performing a systematic analysis of the influence of cut-off effects on light quark meson correlators at T=1.5 Tc using clover improved Wilson fermions [1]. In addition new results at 1.2 and 3.0 Tc will be presented.
The first two, non-vanishing thermal moments of the vector meson spectral function are determined and compared with those for free, massless quarks.
We discuss resulting constraints on the electrical conductivity and the thermal dilepton rate in a quark gluon plasma.

[1] H.-T. Ding et al. Phys.Rev.D83(2011)034504

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