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Charmonium spectral functions from 2+1 flavour lattice QCD

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Finite temperature charmonium spectral functions in the pseudoscalar and vector channels are studied in lattice QCD with 2+1 flavours of dynamical Wilson quarks, on fine isotropic lattices (with a lattice spacing of 0.057fm), with a pion mass of 545MeV. The highest temperature studied is approximately 1.4Tc. Up to this temperature no significant variation of the spectral function is seen in the pseudoscalar channel. The vector channel shows some temperature dependence, which seems to be consistent with a temperature dependent low frequency peak related to heavy quark transport, plus a temperature independent term at omega>0. These results are in accord with previous calculations using the quenched approximation.

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