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Charmonium spectra and dispersion relation with improved Bayesian analysis in lattice QCD

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We study the charmonium property at finite temperature and finite momentum in
quenched lattice QCD with improved maximum entropy method (MEM).
We extend the MEM analysis to the product space of the correlation functions at more
than two different momenta to take advantage of more data and the strong
correlation among Euclidean correlators with different momenta.
Then we find that this method drastically improves the error of
the reconstructed images.
We apply this method to analyze the dispersion relation of charmonia at finite temperature with two different
lattice spaces.

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