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Hybrid Charmonium at Finite Temperature

Friday 7 November 2025 16:40 (20 minutes)

Drawing upon well established zero-temperature techniques, we present, for the first time, insight into the fate of the 1^{-+} exotic charmonium state at finite temperature using anisotropic FASTSUM ensembles. Specifically, we use distillation with a wide operator basis which has been extensively used at zero-temperature by the Hadron Spectrum Collaboration to study the charmonium spectrum. The constant contribution to some finite temperature temporal correlation functions requires particular care with the extended operator basis common to distillation setups and we discuss this effect. As an alternative to derivative based extended operators, we also consider the use of optimal distillation profiles at finite temperature for the first time. Finally, we remark on the change to the 1^{-+} spectral function via consideration of the reconstructed correlator method.

Parallel Session (for talks only)

QCD at nonzero temperature and density

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