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Quarkonium Spectral Functions at zero and finite temperature PETER PETRECZKY, BNL, SAUMEN DATTA TEAM, FRITHJOF KARSCH TEAM, ANTAL JAKOVAC TEAM, KOSTYA PETROV TEAM, ALEXANDER VELYTSKY TEAM — I present calculations of quarkonium spectral functions at zero and finite temperature in lattice QCD. Calculations are performed in quenched approximation using both isotropic and anisotropic lattices. Lattice artifacts and systematic uncertainties are investigated in the zero temperature limit in detailed where many data points in the time direction are available. Then finite temperature spectral functions for charmonia and bottomonia spectral functions are presented. It has been found that 1S state charmonia (J/psi, η_c) can survive in the plasma up to temperatures $1.5T_c$ with little in-medium modification, while 1S bottomonia states (Υ and η_b) exist in the plasma up to temperatures $4.5T_c$. The 1P states (χ_c , χ_b), on the other hand, dissolve at tempearures of about $1.1T_c$.

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