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NRQCD Bottomonium spectrum at non-zero temperatures using Backus-Gilbert regularisations

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Understanding how the properties of heavy mesons change as temperature increases is crucial for gaining valuable insights into the properties of the quark-gluon plasma. The information about meson mass and decay width is encoded in the meson spectral function, which, in principle, can be extracted from Euclidean correlation functions via Laplace transformation. Unfortunately, this inverse problem is ill-posed when working with lattice correlators, hence it must be regularised. In this talk, we will present our latest results for bottomonium spectral functions obtained within the lattice NRQCD framework using the Backus-Gilbert regularization, along with two other variants (one of which is commonly referred to as the HLT method). This study employs the latest anisotropic lattice configurations produced by the FASTSUM collaboration.

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