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Heavy quarks in the quark-gluon plasma from lattice QCD

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We present recent results for correlators and spectral functions of mesons containing charm and beauty quarks below and above the deconfinement crossover. The results are obtained using anisotropic lattice QCD with 2+1 dynamical quark flavours. The high-temperature results are benchmarked against reconstructed correlators determined from the zero-temperature correlator, allowing us to disentangle temperature effects from the effects of the reduced range of the temporal correlator. In the open-charm sector, we find significant thermal modifications already below the deconfinement crossover, and no sign of any surviving bound states above T_c . For S-wave quarkonium, our results suggest that these states survive well into the QGP phase.

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