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Temperature Dependence of Heavy Quark Diffusion from 2+1-Flavor Lattice QCD

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We present a lattice d termination of the heavy quark diffusion coefficient in 2+1 flavor QCD with alm st physical quark masses in a wide temperature range. The momentum and spatial diffusion coefficients are extracted for a wide temperature range from T=153 MeV to 10 GeV. The results are in agreement with previous work from the Hot QCD collaboration and show fast thermalization of the heavy quark inside the QGP. Close to the chiral crossover temperature $T_c\simeq 150$ MeV our results are close to the AdS/CFT bound calculated at strong coupling.

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