

Non-extensive Fokker-Planck transport coefficients of heavy quarks

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In presence of the non-ideal plasma effects, Heavy Quarks (HQs) carry out non linear random walk inside Quark-Gluon Plasma (QGP) and in the small momentum transfer limit, the evolution of the HQ distribution is dictated by the Non Linear Fokker-Planck Equation (NLFPE). Using the NLFPE, we calculate the transport coefficients (drag and diffusion) of heavy quarks travelling through QGP. We observe substantial modification in the momentum and temperature variation of the transport coefficients; and this will modify the physical picture we are having about the transport of heavy quarks inside QGP, and hence, about the characterisation of the plasma.

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