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Heavy quark potential in anisotropic medium

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In this work, the real part of the static potential of a heavy quark-antiquark system in an anisotropic plasma medium is studied. The collective dynamics of the plasma constituents is described using hard-loop perturbation theory. The distribution function of the medium is characterized by a general set of anisotropy parameters. We calculated the real part of the heavy quark potential numerically and studied the angular dependence of the distortion of the potential relative to the isotropic one. Our study suggests that plasma anisotropy plays an important role in the dynamics of heavy quarkonium.

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