



Nuclear Theory

Momentum dependence of drag coefficients and heavy flavour suppression in quark gluon plasma

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(Submitted on 14 Jun 2011 (v1), last revised 7 Oct 2011 (this version, v2))

The momentum dependence of the drag coefficient of heavy quarks propagating through quark gluon plasma (QGP) has been evaluated. The results have been used to estimate the nuclear suppression factor of charm and bottom quarks in QGP. We observe that the momentum dependence of the transport coefficients plays crucial role in the suppression of the heavy quarks and consequently in discerning the properties of QGP using heavy flavours as a probe. We show that the large suppression of the heavy quarks observed at RHIC and LHC is predominantly due to the radiative losses. The suppression of R_{AA}^D in Pb+Pb collisions at LHC energy - recently measured by the ALICE collaboration has also been studied.

Comments: Minor changes in the text
Subjects: **Nuclear Theory (nucl-th)**; High Energy Physics - Phenomenology (hep-ph)
Journal reference: Phys. Rev. C 84, 044901 (2011)
DOI: [10.1103/PhysRevC.84.044901](https://doi.org/10.1103/PhysRevC.84.044901)
Cite as: [arXiv:1106.2615](https://arxiv.org/abs/1106.2615) [nucl-th]
(or [arXiv:1106.2615v2](https://arxiv.org/abs/1106.2615v2) [nucl-th] for this version)

Submission history

From: Jan-e Alam Dr. [[view email](#)]
[\[v1\]](#) Tue, 14 Jun 2011 05:53:06 GMT (29kb)
[\[v2\]](#) Fri, 7 Oct 2011 04:28:34 GMT (30kb)

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