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Jet Formation and Interference in Quark Gluon Plasma

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We study the double inclusive emission of gluons off a hard parton
propagating in thin QCD plasma. Within the N=1 opacity approximation, we determine the induced emission pattern of two gluons which are soft compared to
the parton energy but hard compared to the medium scale. We assume a wide separation between the energies of those two gluons, but we allow arbitrary ordering of their emission angles. We select the transverse momenta of the induced gluons such that only the softest one may be medium induced. We study the ordering properties of a hard jet forming in the medium by analyzing the interference pattern of the softest gluon with respect to the hard quark-gluon core. We concentrate in the regime in which the formation times of both gluons are comparable and discuss the interplay between interferences and the formation time of the quark-gluon subsystem.

On behalf of collaboration:

NONE

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