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Presentation 18: Factorization of multiple in-medium gluon emissions

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Despite some results indicating that factorization survives in most phenomenological relevant scenarios, the underlying assumptions may be too restrictive and erase most of the relevant dynamics. Motivated by the ongoing effort to verify the factorizability of successive in-medium emissions, this work aims to obtain the matrix elements for the emission of two gluons by an energetic quark in the presence of a deconfined medium and numerically calculate the resulting differential cross-section. This is made possible by recent results obtained by the Pheno Group at LIP, in the formulation of the problem along with its potential numerical implementation, allowing for greater generality.

Presenter: GUERREIRO, Afonso (Instituto Superior Técnico)