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# Deep inelastic scattering off quark-gluon plasma and its photon emissivity

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The photon emissivity of quark-gluon plasma probes the interactions in the medium and differs qualitatively between a weakly coupled and a strongly coupled plasma in the soft-photon regime. The photon emissivity is given by the product of kinematic factors and a spectral function associated with the two-point correlator of the electromagnetic current at lightlike kinematics. A certain Euclidean correlator at imaginary spatial momentum can be calculated in lattice QCD and is given by an integral over the relevant spectral function at lightlike kinematics. I will present a first exploratory lattice calculation of this correlator. Secondly, I will show how Euclidean correlators at imaginary spatial momenta can also be used to probe the regime of deep inelastic scattering off quark-gluon plasma, which reveals its parton distribution function.

**Primary authors:** TONIATO, Arianna (Universität Mainz); TÖRÖK, Csaba (Helmholtz-Institut Mainz); MEYER, Harvey (Johannes Gutenberg University Mainz); CÈ, Marco (CERN); HARRIS, Tim (University of Milan Bicocca)

**Presenter:** MEYER, Harvey (Johannes Gutenberg University Mainz)

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