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One-point correlators of conserved and non-conserved charges in QCD

Tuesday, 20 August 2024 09:00 (30 minutes)

One-point correlators of conserved charges are argued to be perturbatively IR safe in QCD, which includes not only the density of energy, but also those of electric charge, isospin and baryon number. Theoretical and phenomenological aspects of the density matrix of one-point correlators will be discussed in the context of the states produced by a chiral current, as in the decay of a polarized electroweak boson. Densities of some non-conserved charges such as energy with arbitrary non-negative powers, despite their incalculability, will be shown to obey an infinite set of consistency constraints. QCD seems to live near a kink in the allowed parameter space of one-point correlators.

Presenter: SON, Minho

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