

Abstract Submitted
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Pair creation of quarks and gluons under color electric fields¹

NAOTO TANJI, University of Tokyo, Komaba — Non-perturbative pair creation of quarks and gluons from a uniform electric field and its back reaction are investigated to explore the mechanism of matter formation in heavy-ion collisions. Time-evolution of a system where a classical color electric field and quantum fields of quark and gluon interact with each other is studied up to leading order of quantum fields. We reveal how an initial electric field decays into particles and compare momentum distributions of quark and gluon.

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