

Abstract Submitted
for the HAW09 Meeting of
The American Physical Society

Pair Creation of Quarks in Electric Flux Tube AIICHI IWAZAKI,
Nishogakusha-U — We discuss the pair production of massless fermions under the flux tube of electric field \vec{E} and homogeneous magnetic field \vec{B} , using the formula of chiral anomaly. The tube of the electric field is finite in transverse directions but infinitely long in longitudinal direction. In the limit of $B \gg E$, we can analytically obtain the spatial and temporal behaviors of the electric field and transverse magnetic field generated by currents of the produced particles. We find that the life time t_c of the electric field is shorter as the width of the tube is narrower. Applying the result to the glasma in high-energy heavy-ion collisions, we find that $t_c \simeq 7Q_s^{-1}$ with saturation momentum Q_s .

Aiichi Iwazaki
Nishogakusha-U

Date submitted: 26 Jun 2009

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