

Abstract Submitted
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Catalysis of chiral symmetry breaking in dense QED PAUL SPRINGSTEEN, University of Texas at El Paso, EFRAIN FERRER, VIVIAN INCERA, University of Texas at El Paso Department of Physics, ANGEL SANCHEZ, National Autonomous University of Mexico Department of Physics — We investigate the phenomena of magnetic catalysis of chiral symmetry breaking in dense QED. We first calculate the photon polarization operator at finite density in the strong-field limit and use it to find the Debye mass and the electrical susceptibility. The chiral condensate is then calculated beyond ladder approximation, and the critical density for condensate evaporation is found.

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