

Abstract Submitted
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Electromagnetic Properties of Extremely Hot and Dense Media of Superdense Systems SAMINA MASOOD, University of Houston Clear Lake — We study the properties of particles in extremely hot and dense media of superdense systems. Using the properties of vacuum polarization tensors in a medium, we study the properties of superdense systems. We use simple QED type calculations to start comparison of different approaches to choose the best out of them to be able to learn more about these systems. We show that the electromagnetic properties of the medium such as electric permittivity, magnetic permeability and the refractive index of the medium become function of statistical parameters such as temperature and density of the medium. However, we can rule out certain combination of temperature and density regions for physical systems.

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