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Chemical potential effect on dual photon radiation in relativistic heavy ion collision

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The electromagnetic probes are one of the unique probe which determine the state of quark gluon plasma (QGP). These are only the signal which travel through the whole space-time volume due to weak interaction from surrounding medium. With theoretical quasiparticle model, we found that production rate increases with increase the chemical potential values. By including the chemical potential, the behavior of the system of QGP changes drastically due to the interaction among the particles. We plot the dual photon spectrum with respect to mass at suitable high temperature and finite chemical potential incorporating the quark mass value. This quark mass depends on both temperature and chemical potential which enhance the production rate of dual photon. Thus, the results are important in the investigation of quark gluon plasma at RHIC and LHC.

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