

# Electromagnetic radiation in heavy ion collisions: Progress and puzzles

*Thursday, 31 May 2012 10:00 (30 minutes)*

I review the theory behind the emission of electromagnetic radiation in relativistic collisions. The rates for photon and lepton pair production are examined, both for a quark-gluon plasma and for a hadronic gas at finite temperatures and densities. A special emphasis is placed on the connection between electromagnetic spectra and the details of modern 3D hydrodynamic simulations of high-energy nuclear collisions. More specifically, the effects of a finite shear viscosity coefficient are examined, together with those of fluctuating initial states. I will summarize our current understanding of the relevant experimental data.

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