Perturbing QCD with external fields

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We present some up-to-date results on QCD phase transition in a chromomagnetic constant background field and in an abelian monopole background field. Our results indicate that the QCD critical temperature is not modified by a monopole background field, whilst it is modified by a constant chromomagnetic field. We improve our earlier estimate of the QCD critical parameters in a chromomagnetic background field by performing lattice simulations with weaker fields.