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Type: **Parallel Talk**

Phase diagram of QCD in strong background magnetic field

Friday, 8 July 2022 09:00 (15 minutes)

We discuss the phase diagram of QCD in the presence of a strong magnetic background field, providing numerical evidence, based on lattice simulations of QCD with 2+1 flavours and physical quark masses, that the QCD crossover turns into a first order phase transition for large enough magnetic field, with a critical endpoint located between $eB = 4 \text{ GeV}^2$ (where we found an analytic crossover at a pseudo-critical temperature $T_c = (98 \pm 3) \text{ MeV}$) and $eB = 9 \text{ GeV}^2$ (where the measured critical temperature is $T_c = (63 \pm 5) \text{ MeV}$).

In-person participation

Yes

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