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QCD topology with extreme electromagnetic fields

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We present the first non-perturbative determination of the magnetic field dependence of the QCD topological susceptibility for temperatures in the crossover region from Lattice QCD. At low temperatures we observe that the sum rule that relates the magnetic field dependence of the susceptibility and the chiral condensate is maintained well beyond the weak magnetic field limit. Furthermore we will also discuss our recent progress regarding the non-perturbative determination of the QCD contributions to the axion-photon coupling.

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