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## Background electric and magnetic fields in cosmological de Sitter spacetime and correlations

We investigate analytically and numerically the aspects of entanglement for quantum field theoretic systems in the presence of constant-strength background electric and magnetic fields for the cosmological de Sitter spacetime. In particular, we wish to emphasize the role of the magnetic field in the presence of background electric or gravitational fields. Will it oppose the effect of an electric field? How does it affect the correlations between particles and antiparticles produced by the electric or gravitational fields?

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