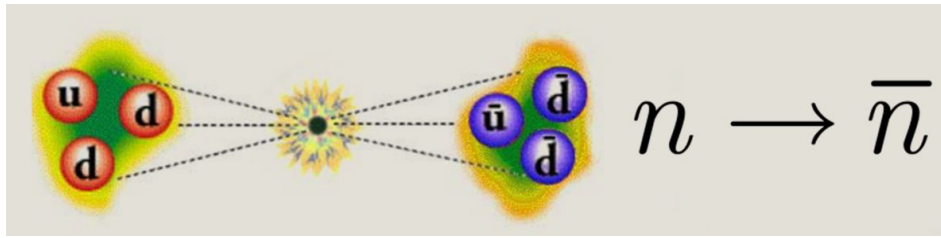


Theoretical Innovations for Future Experiments Regarding Baryon Number Violation, Part 1



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Lattice QCD matrix elements of Delta B = 2 operators

Tuesday, 4 August 2020 12:30 (30 minutes)

Theories of B-L violation beyond the Standard Model (BSM) generically lead to the appearance of six-quark operators in Standard Model effective field theory that give rise to neutron-antineutron oscillations and Delta B = 2 nuclear decays. Reliably connecting the results of experimental searches for these processes to constraints on the parameters of BSM physics theories requires Standard Model calculations of the matrix elements of these six-quark operators between hadronic states. I will report on lattice quantum chromodynamics calculations of a complete basis of Delta B = 2 six-quark operators and a few of their implications for current and future searches for Delta B = 2 processes.

Contribution Title

Lattice QCD matrix elements of Delta B = 2 operators

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