

## **VACUUM CORRELATION BETWEEN THE ELECTROMAGNETIC AND STRONG FORCES**

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Recent developments in Lattice Quantum Chromodynamics (QCD) have introduced Quantum Electrodynamics (QED) effects into configuration generation. Using recent lattice ensembles incorporating both QCD and QED effects produced by the QCDSF collaboration, we are able to reveal for the first time evidence suggesting an interplay between these two forces. By considering the individual QCD and QED action densities across 3-dimensional slices of the full 4-dimensional lattice, we find strong evidence pointing towards an anti-correlation between these two action densities.

By computing the electric and magnetic fields on these QCD+QED lattices, we search for additional (anti-)correlation between QCD and QED vacuum effects.