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Yang-Mills correlation functions due to percolating center vortices

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Lattice simulations show that Yang-Mills theory's infrared properties are captured by ensembles of collimated configurations formed by center vortices and monopoles. In this work, we continue to study the properties of these ensembles relying on an infrared vacuum wavefunctional peaked at center-vortex configurations that was recently proposed in Coulomb gauge. In particular, we compute and compare two-point spatial correlation functions within this framework with the same results obtained within a variational approach. We verify an agreement that suggests a universal behavior for theories whose confinement mechanism is related to the presence of a monopole condensate.

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