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String confinement in 2-form lattice gauge theory

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We study the confinement between vortex strings in a 2-form gauge theory by using the lattice Monte Carlo simulation. We calculate the string-antistring potential from the surface operator of the 2-form gauge field in the abelian 2-form lattice gauge theory, which is dual of the abelian Higgs model in continuum limit. The linear confining potential appears in a confinement phase and it disappears in a deconfinement phase. The phase diagram of the theory is also studied.

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