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## New results on the effective string corrections to the interquark potential.

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We propose a new approach to the study of the interquark potential in LGTs. Instead of looking at the expectation value of Polyakov loop correlators we study the modifications induced in the chromoelectric flux due to the presence of the Polyakov loops. This approach is particularly effective in the case of abelian LGTs where, with a careful use of duality relations this study can be performed in a very efficient way.

The major advantage of this numerical strategy is that it allows to eliminate the dominant effective string correction to the interquark potential (the Luscher term) thus giving an unique opportunity to test higher order terms. Performing a set of simulations in the 3d gauge Ising model we were thus able to precisely identify and measure both the quartic and the sextic effective string corrections.

While the quartic term perfectly agrees with the Nambu-Goto one the sextic term is definitely different. We discuss the implications of this finding in view of the recent proof of the universality of the sextic correction by Aharony and Karzbrun.

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talk

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