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The static three-quark potential from the Polyakov loop correlation function

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We study the static three-quark potential in SU(3) lattice gauge theory at zero temperature with the Polyakov loop correlation function (PLCF) consisting of three Polyakov loops.
Compared to the use of the three-quark Wilson loop, the PLCF allows us to investigate
the ground state potential of various three-quark configurations in detail with less systematic effects.
We overcome the problem of the statistical errors by employing the multi-level algorithm
and obtain remarkably clean signals.
We present these results and discuss the possible shape of the confining string for the three-quark system.

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