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## **Studies of Gauge-fixed Fourier acceleration for $SU(3)$ gauge theory**

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We report results from the application of Fourier acceleration to  $SU(3)$  lattice gauge theory using softly-fixed Landau gauge. Acceleration of the HMC algorithm is studied on a  $16^4$  lattice volume with the Wilson gauge action and different values of  $\beta$ . Two types of boundary conditions with fixed boundary links are explored. The boundary links are fixed either to unit matrices or to the matrices present on the boundaries of an initial gauge configuration equilibrated with periodic boundary conditions, anticipating a possible application in which a large lattice is continually divided into subvolumes that are evolved independently.

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