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## Physical Point Simulation in 2+1 Flavor Lattice QCD

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We present the results of the physical point simulation in 2+1 flavor lattice QCD with the nonperturbatively O(a)-improved Wilson quark action and the Iwasaki gauge action at beta=1.9 on a 32<sup>3</sup>x64 lattice. The physical quark masses together with the lattice spacing is determined with m\_pi, m\_K and m\_Omega as physical inputs. There are two key algorithmic ingredients to make possible the direct simulation at the physical point: One is the mass-preconditioned domain-decomposed HMC algorithm to reduce the computational cost. The other is the reweighting technique to adjust the hopping parameters exactly to the physical point. We discuss the latter in detail.

Some physics results are also presented.

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