The 33rd International Symposium on Lattice Field Theory (Lattice 2015)



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Algorithmic improvements for weak coupling simulations of domain wall fermions

Tuesday, 14 July 2015 14:00 (20 minutes)

We discuss algorithmic improvements being used in the evolution of new 2+1+1 flavor lattices by the RBC/UKQCD collaboration. A technique similar to Hasenbusch mass splitting and suggested previously by Brower, Neff, and Orginos allows the light quark action to be split into multiple parts with different values of L_s, the size of the fifth dimension. This allows us to reduce chiral symmetry breaking by making L_s large while most inversions are actually done at a cheaper, smaller value of L_s.

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