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RHMC with block solvers and multiple pseudofermions

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The dominant cost of most lattice QCD simulations is the inversion of the Dirac operator required to calculate the force term in the RHMC update.

One way to improve this situation is to use multiple psuedofermions, which reduces the force and hence allows a larger integration step size to be used, at the cost of having to invert the Dirac operator for each pseudofermion field.

Recently there has been renewed interest in the use of block krylov solvers, which can solve multiple right hand side vectors with significantly fewer iterations than are required if each vector is solved using a separate krylov solver.

We investigate combining these two ideas to speed up RHMC simulations.

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