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BQCD – Berlin quantum chromodynamics program

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BQCD is a Hybrid Monte-Carlo program that simulates lattice QCD with dynamical Wilson fermions. The development of BQCD began in Berlin in 1998 for studies of parallel tempering and the Aoki phase. For ten years BQCD has been one of the main production programs of the QCDSF collaboration. The program has been ported to and optimised for different massively parallel machines, for instance QPACE. The code is written mainly in Fortran. We have implemented 2 and 2 + 1 fermion flavours with pure, clover improved, and stout smeared fat link Wilson fermions as well as standard plaquette, and an improved (rectangle) gauge action. The single flavour is simulated with the RHMC algorithm. BQCD is free software under the GNU General Public License. It can be downloaded from <http://www.zib.de/stueben/bqcd>.

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poster

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