

## Issues

#	Project	Tracker	Status	Priority	Subject	Assignee	Target version	Due date
740	CL2QCD	Defect	New	Normal	CMakeLists.txt and OpenCL variable names			
739	CL2QCD	Defect	New	Normal	BOOST_TEST_MESSAGE instead of BOOST_MESSAGE			
738	CL2QCD	Feature	In Progress	Normal	Extend RHMC to rational value of number of tastes	Alessandro Sciarra		
735	CL2QCD	Feature	In Progress	Normal	Implement staggered inverter and profile it	Alessandro Sciarra		
733	CL2QCD	Feature	In Progress	Normal	Profile the rhmc executable	Alessandro Sciarra		
732	CL2QCD	Feature	In Progress	Normal	Refactor CG-M and speed it up	Alessandro Sciarra		
731	CL2QCD	Feature	In Progress	Normal	Implement option to choose which inverter to use in the Pbp calculation	Christopher Pinke		
730	CL2QCD	Benchmark	New	Normal	Improve kernel performance on GPU by tuning work group sizes	Christopher Pinke		
729	CL2QCD	Defect	New	Normal	Work over fermion tests with rec12	Christopher Pinke		
728	CL2QCD	Feature	New	Normal	Add maximum trajectory number for HMC	Christopher Pinke		
727	CL2QCD	Feature	New	Low	Make solver print accumulated Bandwidth usage in addition to FLOPS	Christopher Pinke		
726	CL2QCD	Feature	In Progress	Normal	Merge saxpy and gamma5	Francesca Cuteri		
725	CL2QCD	Defect	Feedback	Normal	Merging cg_singledev and cg_multidev	Matthias Bach		
724	CL2QCD	Defect	In Progress	Normal	Refactor solver.cpp	Christopher Pinke		
723	CL2QCD	Defect	New	Normal	USE_ASYNC_COPY in cg_singledev	Matthias Bach		
722	CL2QCD	Feature	New	Normal	Implement merged spinor kernels in bicgstab, cg_multidev solvers	Christopher Pinke		
719	CL2QCD	Feature	Feedback	Normal	Implement Input-Output for Rational Approximation	Matthias Bach		
717	CL2QCD	Feature	In Progress	Normal	Speed up inverter	Francesca Cuteri		
716	CL2QCD	Defect	Feedback	Normal	Re-read of prng state sometimes fails on loewe	Christopher Pinke		
715	CL2QCD	Defect	Code Review	Normal	gaugeobservables executable broken	Christopher Pinke		
713	CL2QCD	Feature	New	Normal	Work over ildglo_gaugefield functions	Christopher Pinke		
711	CL2QCD	Feature	New	Normal	Encapsulate lime fcts. in own namespace and implement interface	Christopher Pinke		
709	CL2QCD	Defect	New	Normal	physics::observables::wilson::twoFlavourChiralCondensate_GPU (Failed)		2014.1	
704	CL2QCD	Defect	New	Normal	geometry (Failed)		2014.1	
703	CL2QCD	Defect	New	Normal	hardware_code_fermions_merged_kernels_test_GPU (Failed)		2014.1	
689	CL2QCD	Feature	New	Normal	Move "thermalizationsteps" as common parameters of Heathbath, Hmc, Rhmc	Christopher Pinke		
683	CL2QCD	Defect	In Progress	Normal	Refactoring of meta::inputparameters	Matthias Bach		
682	CL2QCD	Defect	New	Low	Reduce number of test configurations	Christopher Pinke		
680	CL2QCD	Defect	New	Normal	usage of meta::version.hpp	Christopher Pinke		
679	CL2QCD	Feature	New	Normal	Add check for gcc version to CMake			
678	CL2QCD	Defect	New	Normal	Make members const in generalExecutable class	Christopher Pinke		

675	CL2QCD	Defect	New	Normal	Linking bug in algorithms	Christopher Pinke		
674	CL2QCD	Feature	In Progress	Normal	Create class for wilson Nf=2 correlators	Christopher Pinke		
671	CL2QCD	Unit Test	New	Normal	Refactoring of merged kernel modules			
669	CL2QCD	Unit Test	New	Normal	Refactoring of opencl_correlator_module	Christopher Pinke		
664	CL2QCD	Unit Test	In Progress	Normal	Refactoring of opencl_module_gaugemomentum_test	Christopher Pinke		
662	CL2QCD	Unit Test	Code Review	Normal	Refactoring of opencl_module_fermions_test	Christopher Pinke		
617	CL2QCD	Defect	In Progress	Normal	Refactor of ildg IO	Christopher Pinke		
592	CL2QCD	Feature	New	Normal	Develop a get_scalar method for physics::lattices::Vector class	Alessandro Sciarra		05 Feb 2014
591	CL2QCD	Feature	New	Normal	Refactor physics::lattices::Scalar class as particular case of physics::lattices::Vector	Alessandro Sciarra		
577	CL2QCD	Defect	New	Low	Move Opencl_compiler to hardware namespace			
576	CL2QCD	Defect	New	Normal	Clean up CMakeLists.txt			
574	CL2QCD	Defect	New	Normal	Opencl_module_correlators_CPU failies	Christopher Pinke		
573	CL2QCD	Defect	New	Low	Move parameter functionality from spinors module to meta	Christopher Pinke		
563	CL2QCD	Feature	In Progress	Normal	Optimize D_KS even-odd staggered	Alessandro Sciarra		
558	CL2QCD	Defect	Feedback	Normal	Name of repository	Matthias Bach	2013.3	
547	CL2QCD	Benchmark	New	Normal	Verify Dslash Performance			
546	CL2QCD	Feature	New	Normal	Implement Proper Memory Access Patterns in CL2QCD			
545	CL2QCD	Feature	New	Normal	Figure Out and Document Proper Memory Access Patterns			
544	CL2QCD	Feature	New	Normal	Implement Mixed-Precision CG using reliable updates			
543	CL2QCD	Feature	New	Normal	Implement Single-Precision Dslash			
542	CL2QCD	Feature	New	Normal	Implemented Basic Even-Odd Single-Precision Gaugefield			
541	CL2QCD	Feature	New	Normal	Implemented Basic Even-Odd Single-Precision Spinofields			
540	CL2QCD	Feature	New	Normal	Create Buffer Classes for Single-Precision SU3			
539	CL2QCD	Feature	New	Normal	Create Buffer Classes for Single-Precision Spinors			
538	CL2QCD	Feature	New	Normal	In Host Code replace hmc_float by double			
536	CL2QCD	Feature	New	Normal	Properly support Xeon Phi			
535	CL2QCD	Feature	New	Normal	Properly support NVIDIA GPUs			05 Dec 2013
534	CL2QCD	Feature	New	Normal	Mixed-Precision solver for TM-Fermions			
531	CL2QCD	Feature	New	Normal	OpenCL-Find-Script ins repository hinzufügen		2013.3	
514	CL2QCD	Feature	New	Normal	Öffentliche Verfügbarkeit von DirectGMA verifizieren		2013.3	
505	CL2QCD	Feature	In Progress	Normal	Veröffentlichung unter GPL3		2013.3	
495	CL2QCD	Feature	New	Normal	Phase quenched Action	Christopher Pinke		
494	CL2QCD	Feature	New	Normal	Symmetric Action	Christopher Pinke		
478	CL2QCD	Defect	New	Normal	PolyakovLoop broken prior to commit:98915ae0	Christopher Pinke		

477	CL2QCD	Feature	In Progress	Normal	Develop the su3vec class in hardware::buffers	Matthias Bach		
476	CL2QCD	Defect	New	Low	Some (not grave) mistakes in Spinors class	Christopher Pinke		
475	CL2QCD	Defect	New	Low	NDIM instead of NSPIN in calculation of flops	Christopher Pinke		
472	CL2QCD	Defect	Feedback	Normal	gaussianNormalPair does not work with _use_same_rnd_numbers	Matthias Bach		
471	CL2QCD	Defect	New	Normal	Check Initialization of prng with same_rnd_numbers	Matthias Bach		
469	CL2QCD	Unit Test	In Progress	Normal	Currently failing tests	Alessandro Sciarr		
468	CL2QCD	Defect	Feedback	Normal	Use_same_rnd_numbers parameter broken	Matthias Bach		
464	CL2QCD	Defect	Feedback	Normal	Work over get_work_sizes	Matthias Bach		
462	CL2QCD	Defect	Feedback	Normal	Fix local reductions	Matthias Bach		
461	CL2QCD	Defect	Feedback	Normal	Scalar Product broken for larger lattices with commit:14e176e6	Matthias Bach		
459	CL2QCD	Feature	New	Normal	Implement helper fcts for output in HMC related modules	Christopher Pinke		
431	CL2QCD	Feature	New	Normal	Use algorithms::solver functionality in HMC init spinorfield energy			
429	CL2QCD	Defect	Feedback	Normal	Handling of "BiCGStab stuck"	Matthias Bach		
428	CL2QCD	Feature	New	Normal	Reconsider structure of staggered implementation	Alessandro Sciarr		
420	CL2QCD	Feature	New	Normal	Deleay memory allocation if device is low on memory	Matthias Bach		
418	CL2QCD	Unit Test	New	Normal	Implement tests for SOA related kernels			
417	CL2QCD	Defect	In Progress	Normal	Dump functionality in SOA case for gm buffer	Matthias Bach		
416	CL2QCD	Defect	Feedback	Normal	Merged spinor kernels broken	Matthias Bach		
413	CL2QCD	Feature	New	Normal	Implement stout smear force			
410	CL2QCD	Unit Test	New	Normal	tests for physics::algorithms::<molecular_dynamics>			
408	CL2QCD	Feature	In Progress	Normal	Implement measurement of higher orders of polyakov loop			
402	CL2QCD	Feature	New	Normal	Merge eo and non-eo solvers			
389	CL2QCD	Defect	In Progress	High	Check on Inversion with even-odd-preconditiong	Christopher Pinke		30 Apr 2013
387	CL2QCD	Defect	New	High	Broken geometric conventions in dslash_eo?	Christopher Pinke		
380	CL2QCD	Feature	Feedback	Normal	Abort HMC if NaNs are encountered	Matthias Bach		
372	CL2QCD	Feature	New	Normal	Measure number of iterations during HMC			
366	CL2QCD	Defect	In Progress	High	HMC hangs for large lattices on Tahiti	Matthias Bach		
364	CL2QCD	Feature	New	Normal	Implement chronological solver	Christopher Pinke		
363	CL2QCD	Feature	New	Normal	Implement guess function for solver	Christopher Pinke		
347	CL2QCD	Benchmark	In Progress	Normal	Improve HMC on small lattices with imaginary chemical potential	Matthias Bach		
346	CL2QCD	Feature	New	Normal	Test Correlators with stochastic sources	Christopher Pinke		
340	CL2QCD	Feature	New	Low	I/O of fermion fields	Christopher Pinke		
329	CL2QCD	Feature	New	Normal	Dump kernel attributes by default	Matthias Bach		
323	CL2QCD	Unit Test	New	Normal	Merged fermionmatrix kernels including dslash broken?	Christopher Pinke		25 Jan 2013
320	CL2QCD	Feature	New	Normal	Remove _USE_SOA_ kernel define			

299	NUMA Bench 2	Feature	New	Normal	check out mbind to allocate the different memory regions explicetely in given NUMA regions	Matthias Kretz		
271	CL2QCD	Benchmark	In Progress	Normal	HMC test against tmlqcd		2012.2	
266	CL2QCD	Feature	New	Normal	Proper handling of bandwidth-optimized gaugefield storage		2012.3	
264	CL2QCD	Unit Test	New	Normal	Test for dslash bug fixed in e42481f		2012.3	
263	CL2QCD	Feature	New	Normal	Random number generator per lattice site			02 Mar 2012
262	CL2QCD	Feature	New	Normal	Ranlux based random number generation			
259	CL2QCD	Feature	New	Normal	Refine HMC integration	Christopher Pinke		30 Apr 2012
253	CL2QCD	Feature	New	Normal	CPU Optimization of Inverter		2012.2	
251	CL2QCD	Feature	New	Normal	Enable code for LOEWE-CSC	Matthias Bach	2012.1	11 Dec 2012
248	CL2QCD	Feature	New	Low	Test OpenCL built-in math functions in saxpy-kernels			
247	CL2QCD	Feature	New	Low	Usage of OpenCL built-in math functions			
245	CL2QCD	Defect	New	Low	Cleaning up the host-code	Christopher Pinke		
243	CL2QCD	Feature	Feedback	Low	Geometry on the host	Matthias Bach		
242	CL2QCD	Feature	New	Normal	Simplify functions in the computation of the energy-momentum-tensor	Christian Schäfer		
236	CL2QCD	Feature	In Progress	Normal	Reduce Memory Transfer for SU3-Matrices			
235	CL2QCD	Feature	Feedback	Normal	Count Read/Write sizes and flops in opencl_module_hmc	Matthias Bach	2012.1	
234	CL2QCD	Feature	New	Normal	Stout Smearing	Christopher Pinke		
233	CL2QCD	Defect	New	Normal	printf can cause segfaults on ATI GPU	Matthias Bach		
231	CL2QCD	Feature	New	Normal	Opencl_module_kappa lacks profiling functionality	Christian Schäfer		
229	CL2QCD	Benchmark	New	Normal	Check results for kappa	Christian Schäfer		
228	CL2QCD	Feature	New	Low	Multilevelalgorithm	Christian Schäfer		
227	CL2QCD	Feature	New	Low	FFT	Christian Schäfer		
226	CL2QCD	Feature	New	Normal	Measurement of the energy-momentum-correlator in momentumspace	Christian Schäfer		
225	CL2QCD	Feature	In Progress	Normal	Implementation of the energy-momentum-tensor	Christian Schäfer		
219	CL2QCD	Feature	New	Normal	Computation of the transportcoefficient kappa	Christian Schäfer		
218	CL2QCD	Benchmark	New	Normal	First Optimizations for dslash_eoprec	Matthias Bach		
213	CL2QCD	Feature	In Progress	Normal	Testcase for the anisotropic heatbath	Christian Schäfer		
208	CL2QCD	Unit Test	Feedback	Normal	Geometry Test	Matthias Bach		
203	CL2QCD	Feature	New	Normal	Sort out types of indices	Matthias Bach		
201	CL2QCD	Unit Test	Feedback	Normal	Compiler-Behavior in saxsbyzp kernel	Matthias Bach		
197	CL2QCD	Defect	New	Low	Inputparameters skips any line that contains a Hash			
190	CL2QCD	Defect	New	Low	OpenCL compile fails on NVIDIA Platform	Matthias Bach		
186	CL2QCD	Feature	Feedback	Low	Make dimensions and other positive only values in inputparameters unsigned	Matthias Bach		
180	CL2QCD	Defect	New	High	calculation of transport coefficients on device	Christian Schäfer		

172	CL2QCD	Feature	New	Normal	Worksizes should depend on specific Kernel	Matthias Bach		
165	CL2QCD	Feature	In Progress	Normal	Fermion-Observables	Christopher Pinke		
164	CL2QCD	Feature	New	Normal	Benchmark-Implementation	Matthias Bach		
159	CL2QCD	Feature	New	Normal	tk_kappa parameter info	Christian Schäfer		
138	CL2QCD	Defect	Feedback	Normal	check host_readgauge.cpp	Matthias Bach		
137	CL2QCD	Defect	In Progress	Normal	Computation of kappa_clover does not run on GPU but on CPU	Christian Schäfer		
136	CL2QCD	Feature	New	Normal	Gracefully degrade to OpenCL 1.0	Matthias Bach		
132	CL2QCD	Defect	New	Normal	overrelax kernels have register spilling	Matthias Bach		
131	CL2QCD	Defect	New	Normal	heatbath kernels has register spilling.	Matthias Bach		
109	CL2QCD	Defect	New	Normal	reduction with num_groups>1			
107	CL2QCD	Feature	New	Normal	Document Code using Doxygen			
104	CL2QCD	Feature	New	Normal	Refactor OpenCL Kernels into operations	Matthias Bach		
102	CL2QCD	Feature	New	Normal	Proper implementation of reductions	Matthias Bach		
73	NUMA Bench	Defect	New	Normal	if the argument to processOutput.sh contains a slash the sed call breaks		0.9.3	
72	NUMA Bench	Defect	New	Normal	the latency plots on Intel machines seem to give incorrect numbers		0.9.3	
68	NUMA Bench	Defect	New	Normal	rdtscp is not available on older CPUs	Matthias Kretz	0.9.3	
13	High Performance Linpack	Feature	New	Low	Improved Build System			