

## MILC Asqtad Lattices as of July 2004

$am_{u,d} / am_s$	$10/g^2$	L	$u_0$	res.	$\epsilon$	$a/r_1$	lats
quenched	8.00	20	0.8879	na	na	0.3762(8)	408N
0.02 / na	7.20	20	0.8755	$1 \times 10^{-4}$	0.013	0.3745(14)	370
0.40 / 0.40	7.35	20	0.8822	$2 \times 10^{-5}$	0.03	0.3766(10)	332N
0.20 / 0.20	7.15	20	0.8787	$5 \times 10^{-5}$	0.03	0.3707(10)	341N
0.10 / 0.10	6.96	20	0.8739	$5 \times 10^{-5}$	0.03	0.3730(14)	339N
0.05 / 0.05	6.85	20	0.8707	$1 \times 10^{-4}$	0.02	0.3742(15)	425N
0.04 / 0.05	6.83	20	0.8702	$5 \times 10^{-5}$	0.02	0.3765(14)	351N
0.03 / 0.05	6.81	20	0.8696	$5 \times 10^{-5}$	0.02	0.3775(12)	564N
0.03 / 0.03	6.79	20	0.8689	$5 \times 10^{-5}$	0.02	0.3748(17)	341R
0.02 / 0.05	6.79	20	0.8688	$1 \times 10^{-4}$	0.0133	0.3775(12)	484N
0.01 / 0.05	6.76	20	0.8677	$1 \times 10^{-4}$	0.00667	0.3852(14)	658N
0.01 / 0.05	6.76	28	0.8677	$1 \times 10^{-4}$	0.00667	0.3814(14)	241
0.01 / 0.03	6.75	20	0.8675	$1 \times 10^{-4}$	0.00667	0.3807(16)	180R
0.007 / 0.05	6.76	20	0.8678	$1 \times 10^{-4}$	0.005	0.3783(13)	493N
0.005 / 0.05	6.76	24	0.8678	$5 \times 10^{-5}$	0.003	0.3782(16)	313R
quenched	8.40	28	0.8974	na	na	0.2681(5)	396N
0.031 / 0.031	7.18	28	0.8808	$2 \times 10^{-5}$	0.02	0.2613(9)	496
0.0124 / 0.031	7.11	28	0.8788	$5 \times 10^{-5}$	0.008	0.2698(9)	527N
0.0062 / 0.031	7.09	28	0.8782	$5 \times 10^{-5}$	0.004	0.2714(9)	592N
0.0031 / 0.031	7.08	40	0.8779	$5 \times 10^{-5}$	0.002	0.2721(16)	100R

Parameters of the simulations with the Asqtad action. The first column gives the light and strange quark masses in lattice units, and the second column, the gauge coupling. L is the spatial size of the lattice. The time size is 64 for the coarse lattices and 96 for the fine lattices.  $u_0$  is obtained from the average plaquette. The conjugate gradient residual tabulated here is the residual used in generating configurations; a smaller residual was used in computing hadron propagators.  $\epsilon$  is the time step size in configuration generation. The second to the last column is the lattice spacing in units of  $r_1$  determined from the static potential in this run.  $r_1 \approx 0.317$  fm. The last column is the number of stored lattices. Those marked with an *R* are still running, and those marked with an *N* are publically available from the NERSC Data Connection. The top fifteen lines are the coarse lattices with  $a \approx 0.12$  fm and the last four lines are the fine lattices with  $a \approx 0.09$  fm.