UCRL-TR-225811



BG/L Lattice Validation Run 1

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CHECK PLAQ: 1.6194791010440102e+00 1.6200885246692704e+00

PLAQUETTE ACTION: -4.140012e+06 PLAQUETTE ACTION: -4.139474e+06 PLAO: 1.619479 1.620089

PBP: mass 7.650000e-03 6.752252e-02 6.913020e-02 5.176642e-03

5.176353e-03 (1 of 1)

PBP: mass 7.650000e-02 1.784727e-01 1.748120e-01 -6.813646e-04

-6.813646e-04 (1 of 1)

PLAQUETTE ACTION: -4.140012e+06 PLAQUETTE ACTION: -4.138503e+06 PLAO: 1.618913 1.619474

PBP: mass 7.650000e-03 7.066680e-02 7.175498e-02 -7.241179e-04

-7.240905e-04 (1 of 1)

PBP: mass 7.650000e-02 1.722798e-01 1.808792e-01 1.955513e-03

1.955597e-03 (1 of 1)

CHECK PLAQ: 1.6189134329037085e+00 1.6194736037543132e+00

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2.000000e-02 2.516680e-03 -1.407526e-05 338 9.723322e-08
2.000000e-02 2.607427e-03 -1.103678e-03 382 9.715458e-08
2.000000e-02 2.534948e-03 1.995989e-05 436 9.849686e-08
2.000000e-02 2.490525e-03 -3.564212e-04 474 9.943225e-08
2.000000e-02 2.560888e-03 -1.525512e-04 471 9.879590e-08
2.000000e-02 2.710588e-03 -3.074461e-04 415 9.884686e-08
2.000000e-02 2.537643e-03 -4.718195e-04 393 9.870514e-08
2.000000e-02 2.709360e-03 2.502035e-04 471 9.741250e-08
2.000000e-02 2.801012e-03 -1.117025e-03 581 9.909262e-08
2.000000e-02 2.572869e-03 -4.422239e-04 511 9.905126e-08
2.000000e-02 2.936959e-03 1.095780e-03 479 9.706315e-08
2.000000e-02 2.788503e-03 1.507447e-04 573 9.854992e-08
2.000000e-02 3.064390e-03 -2.125381e-04 495 9.818680e-08
2.000000e-02 2.602434e-03 -3.316487e-04 462 9.834787e-08
2.000000e-02 2.595219e-03 2.219001e-03 534 9.661373e-08
2.000000e-02 2.855710e-03 7.736566e-04 468 9.817975e-08
2.000000e-02 2.565731e-03 3.097816e-04 479 9.964775e-08
2.000000e-02 2.978106e-03 1.099441e-03 498 9.860761e-08
2.000000e-02 2.800363e-03 -5.835350e-05 508 9.866054e-08
2.000000e-02 2.637485e-03 -2.759016e-04 472 9.855734e-08
2.000000e-02 2.971748e-03 1.020707e-03 455 9.769025e-08
2.000000e-02 3.164576e-03 -1.873846e-04 562 9.804462e-08
2.000000e-02 2.676556e-03 -1.292020e-03 495 9.979348e-08
2.000000e-02 2.946465e-03 4.877309e-04 591 9.599639e-08
2.000000e-02 3.822400e-03 -4.128542e-04 649 9.825898e-08
2.000000e-02 3.262778e-03 -7.179569e-04 563 9.743177e-08
2.000000e-02 2.933658e-03 2.464791e-04 507 9.812047e-08
2.000000e-02 2.705901e-03 -9.396477e-04 460 9.846261e-08
2.000000e-02 3.196503e-03 2.341616e-04 616 9.887020e-08
2.000000e-02 2.573725e-03 -7.365941e-04 488 9.920370e-08
2.000000e-02 2.462826e-03 5.749698e-04 354 9.968512e-08
2.000000e-02 2.466391e-03 8.298696e-05 296 9.821155e-08
2.000000e-02 2.519658e-03 2.255493e-04 347 9.778410e-08
2.000000e-02 2.731971e-03 7.212454e-04 455 9.909295e-08
2.000000e-02 2.586757e-03 7.580062e-05 486 9.868512e-08
2.000000e-02 2.504996e-03 -4.408176e-04 372 9.896920e-08
2.000000e-02 2.616292e-03 -3.319085e-04 371 9.888712e-08
2.000000e-02 2.340927e-03 1.193291e-04 502 9.675697e-08
2.000000e-02 2.648450e-03 -8.069066e-04 445 9.720303e-08
2.000000e-02 2.516510e-03 -1.452909e-04 416 9.909800e-08
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2.000000e-02 5.568201e-03 1.063593e-03 674 9.952071e-08
2.000000e-02 6.066533e-03 1.171117e-03 686 9.987908e-08
2.000000e-02 6.614534e-03 3.382830e-04 696 9.984298e-08
2.000000e-02 6.174924e-03 -1.493066e-04 682 9.810802e-08
2.000000e-02 6.991910e-03 1.301452e-03 657 9.882651e-08
2.000000e-02 6.364921e-03 1.408403e-03 629 9.939948e-08
2.000000e-02 5.960886e-03 1.211390e-03 614 9.792560e-08
2.000000e-02 6.942980e-03 2.391933e-03 652 9.879234e-08
2.000000e-02 6.019299e-03 6.393723e-04 674 9.932319e-08
2.000000e-02 6.407975e-03 -9.972081e-04 617 9.947132e-08
2.000000e-02 6.135162e-03 8.785066e-05 642 9.836663e-08
2.000000e-02 6.645806e-03 1.039835e-04 651 9.945472e-08
2.000000e-02 5.751294e-03 3.995313e-05 621 9.935535e-08
2.000000e-02 5.755645e-03 -2.453120e-04 577 9.923516e-08
2.000000e-02 5.928664e-03 3.159632e-04 639 9.966644e-08
2.000000e-02 6.028251e-03 -1.816591e-03 620 9.983867e-08
2.000000e-02 5.259655e-03 6.045362e-04 630 9.866994e-08
2.000000e-02 5.654855e-03 1.088848e-03 622 9.888165e-08
2.000000e-02 6.099559e-03 -1.172639e-03 623 9.837759e-08
2.000000e-02 5.360894e-03 1.058972e-03 562 9.944206e-08
2.000000e-02 5.620179e-03 -1.210813e-03 549 9.893047e-08
2.000000e-02 5.187540e-03 1.046559e-03 593 9.845082e-08
2.000000e-02 5.361411e-03 6.358436e-04 635 9.826597e-08
2.000000e-02 6.251468e-03 2.038303e-04 594 9.944246e-08
2.000000e-02 5.134534e-03 2.184301e-04 682 9.822459e-08
2.000000e-02 6.312759e-03 -2.717919e-03 610 9.858402e-08
2.000000e-02 5.451560e-03 -7.496715e-05 717 9.937969e-08
2.000000e-02 5.644482e-03 -7.092526e-04 706 9.914071e-08
2.000000e-02 5.513270e-03 9.915929e-04 648 9.995813e-08
2.000000e-02 5.693232e-03 3.310501e-05 690 9.970793e-08
2.000000e-02 6.146764e-03 9.949447e-04 669 9.825356e-08
2.000000e-02 6.537521e-03 3.164892e-04 613 9.844160e-08
2.000000e-02 5.264385e-03 1.431620e-03 596 9.814721e-08
2.000000e-02 5.678583e-03 1.957177e-04 677 9.840897e-08
2.000000e-02 6.480968e-03 -1.069149e-03 678 9.921364e-08
2.000000e-02 5.795137e-03 3.570477e-04 614 9.855822e-08
2.000000e-02 5.039925e-03 -2.009776e-04 621 9.888442e-08
2.000000e-02 5.862456e-03 -1.001422e-03 655 9.877956e-08
2.000000e-02 5.671922e-03 -1.023698e-03 651 9.854119e-08
2.000000e-02 6.155817e-03 3.193235e-04 543 9.764179e-08
```

$Nt=8 \quad (m_{u,d} = 0.1ms)$

beta mu,d ms u0 ns nt ReP dReP chi_L dchi_L cgiter dcgiter pbp_ud dpbp_ud pbp_s dpbp_s plaq dplaq rect drect pgm dpgm pb_dmdu_p_ud dpb_dmdu_p_ud pb_dmdu_p_s dpb_dmdu_p_s dS1 ddS1 dt accept N logfile 6.4580 0.00500 0.0500 0.8549 32

- 8 0.0024 0.0002 0.061 0.004 0.0 0.0 0.07995 0.00018 0.1940 0.0001 1.60249
- $0.00008 \ 0.84230 \ 0.00011 \ 0.86229 \ 0.00013 \ -4.89294 \ 0.00025$
- -4.83945 0.00023 0.01430 0.00e+00 0.00e+00 0.00 880
- o328f21b6458m00820m0820r.00115_01100
- 6.5000 0.00500 0.0500 0.8569 32
- 8 0.0032 0.0003 0.063 0.003 0.0 0.0 0.06690 0.00021 0.1755 0.0002 1.61820
- $0.00016 \ 0.86239 \ 0.00020 \ 0.88358 \ 0.00020 \ -4.88984 \ 0.00036$
- -4.84416 0.00044 0.01430 0.00e+00 0.00e+00 0.00 900
- o328f21b650m00765m0765r.00125 01120
- 6.6000 0.00500 0.0500 0.8616 32
- 8 0.0074 0.0005 0.068 0.004 0.0 0.0 0.04182 0.00018 0.1377 0.0001 1.65320
- 0.00007 0.90737 0.00010 0.93115 0.00011 -4.87391 0.00018
- -4.84310 0.00019 0.01430 0.00e+00 0.00e+00 0.00 925
- o328f21b660m00650m0650r.00145_01145
- 6.6500 0.00500 0.0500 0.8636 32
- 8 0.0127 0.0014 0.079 0.009 0.0 0.0 0.03126 0.00088 0.1216 0.0005 1.66898
- 0.00016 0.92778 0.00023 0.95265 0.00034 -4.86796 0.00049
- -4.84265 0.00057 0.01430 0.00e+00 0.00e+00 0.00 295
- o328f21b665m00599m0599r.00115_00515
- 6.7000 0.00500 0.0500 0.8657 32
- 8 0.0191 0.0007 0.073 0.004 0.0 0.0 0.02109 0.00066 0.1062 0.0003 1.68470
- 0.00006 0.94827 0.00008 0.97417 0.00010 -4.85880 0.00023
- -4.83838 0.00029 0.01250 0.00e+00 0.00e+00 0.00 1006
- o328f21b670m00552m0552r.00269_01275
- 6.7600 0.00500 0.0500 0.8678 32
- 8 0.0276 0.0003 0.077 0.005 0.0 0.0 0.01332 0.00018 0.0905 0.0001 1.70190
- 0.00005 0.97067 0.00008 0.99759 0.00009 -4.85147 0.00015
- -4.83587 0.00017 0.01250 0.00e+00 0.00e+00 0.00 995
- o328f21b676m005m05r.00217_01215

Machine: Nx=64, Ny=32, Nz=32, Nodes = 65536 Cores = 131072

CMAT_TWO SPPROJ TIME IN PCYCLES PER SITE = 769

COMM TIME IN PCYCLES PER SITE = 566

MAT_TRICK TIME IN PCYCLES PER SITE = 471

TRICK TIME IN PCYCLES PER SITE = 202

DSLASH_eo TIME IN PCYCLES PER SITE = 2009 DSLASH_eo PERFORMANCE = 16.1%

INVERTER TIME IN PCYCLES = 1490518860

INVERTER PERFORMANCE = 15.8%

Machine: Nx=32, Ny=32, Nz=32, Nodes = 32768 Cores = 65536

 ${\sf CMAT_TWO~SPPROJ~TIME~IN~PCYCLES~PER~SITE~=~773}$

COMM TIME IN PCYCLES PER SITE = 563

MAT_TRICK TIME IN PCYCLES PER SITE = 474

TRICK TIME IN PCYCLES PER SITE = 203
DSLASH_eo TIME IN PCYCLES PER SITE = 2015

DSLASH_eo PERFORMANCE = 16.1%

INVERTER TIME IN PCYCLES = 1105931328

INVERTER PERFORMANCE = 15.9%