Erratum: Lattice study of large N_c QCD [Phys. Rev. D **94**, 034506 (2016)]

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(Received 20 December 2016; published 9 January 2017)

DOI: [10.1103/PhysRevD.95.019902](https://doi.org/10.1103/PhysRevD.95.019902)

Tables V–VIII,X,XI of results for hadronic spectroscopy for gauge groups $SU(4)$ and $SU(5)$ in the published version of this paper do not use the same action for the valence quarks as for the sea quarks. We present corrected tables of fully unquenched spectroscopy for these two gauge groups. Spectroscopy used Coulomb gauge fixed quark propagators. Gauge fixing is iterative and deterministic. A mistake in the gauge fixing routine slightly roughened the link variables used to

TABLE V. Masses in lattice units for the $SU(4)$ data sets. From left to right, the entries are the hopping parameter κ , the relative scale r_1/a , the axial ward identity quark mass, the pseudoscalar mass, the pseudoscalar decay constant, the vector meson mass, the baryons, labeled by their spin J , and the number of lattices in the measurement set.

$\beta = 10.2 \quad \kappa_c = 0.12795$									
κ	r_1/a	am_q	am_{PS}	af_{PS}	am_V	$am_B(J=2)$	$am_B(J=1)$	$am_B(J=0)$	N
0.1252	2.96(2)	0.086	0.488(2)	0.493(3)	0.643(2)	1.454(18)	1.365(9)	1.322(8)	90
0.1262	3.09(2)	0.054	0.377(1)	0.444(2)	0.561(2)	1.276(13)	1.169(20)	1.123(8)	90
0.1265	3.14(3)	0.045	0.337(1)	0.425(3)	0.529(3)	1.228(9)	1.117(8)	1.064(8)	101
0.1270	3.19(2)	0.029	0.272(2)	0.386(3)	0.484(5)	1.157(19)	1.020(13)	0.977(12)	101
0.1275	3.29(3)	0.013	0.186(2)	0.326(5)	0.472(5)	1.051(17)	0.914(20)	0.840(23)	101

TABLE VI. More $SU(4)$ results, all in lattice units: hopping parameter κ , axial vector mass, tensor mass, vector decay constant, and rescaled condensate in $\overline{MS}$ from jackknife fit.

κ	am_A	am_T	f_V	$(3/4)r_1^3\Sigma$
0.1252	0.901(4)	0.920(5)	1.072(4)	0.234(5)
0.1262	0.801(11)	0.821(9)	1.173(6)	0.198(6)
0.1265	0.774(5)	0.796(6)	1.200(6)	0.187(7)
0.1270	0.705(20)	0.763(7)	1.236(12)	0.149(5)
0.1275	0.646(9)	0.660(11)	1.141(36)	0.122(7)

TABLE VII. Masses in lattice units for the $SU(5)$ data sets.

$\beta = 16.4 \quad \kappa_c = 0.12785$									
κ	r_1/a	am_q	am_{PS}	af_{PS}	am_V	$am_B(J=\frac{5}{2})$	$am_B(J=\frac{3}{2})$	$am_B(J=\frac{1}{2})$	N
0.1240	2.85(1)	0.119	0.581(1)	0.608(2)	0.725(2)	2.098(8)	2.030(6)	1.987(6)	90
0.1252	2.94(1)	0.082	0.472(1)	0.549(2)	0.640(2)	1.864(12)	1.777(10)	1.721(10)	90
0.1258	3.02(2)	0.063	0.401(2)	0.514(3)	0.592(3)	1.729(11)	1.637(10)	1.578(10)	90
0.1260	2.99(1)	0.057	0.385(1)	0.509(3)	0.567(4)	1.697(13)	1.599(13)	1.542(18)	90
0.1265	3.08(1)	0.041	0.323(1)	0.488(3)	0.534(3)	1.585(12)	1.478(9)	1.422(11)	90
0.1270	3.11(1)	0.025	0.247(2)	0.428(3)	0.502(4)	1.474(12)	1.355(12)	1.270(11)	100

TABLE VIII. More $SU(5)$ results, all in lattice units: hopping parameter κ , axial vector mass, tensor mass, vector decay constant, and rescaled condensate in $\overline{MS}$ from jackknife fit.

κ	am_A	am_T	f_V	$(3/5)r_1^3\Sigma$
0.1240	1.002(4)	1.008(4)	1.135(7)	0.275(5)
0.1252	0.909(4)	0.923(4)	1.213(4)	0.221(4)
0.1258	0.833(4)	0.850(5)	1.307(7)	0.199(6)
0.1260	0.837(6)	0.853(4)	1.311(6)	0.187(4)
0.1265	0.773(8)	0.786(7)	1.425(9)	0.175(4)
0.1270	0.724(6)	0.751(7)	1.410(8)	0.135(3)

TABLE X. Baryon mass splittings for $N_c = 4$.

κ	$\Delta m_B(2, 1)$	$\Delta m_B(2, 0)$	$\Delta m_B(1, 0)$
0.1252	0.088(15)	0.132(17)	0.043(8)
0.1262	0.106(18)	0.152(11)	0.046(18)
0.1265	0.111(6)	0.164(7)	0.053(5)
0.1270	0.137(16)	0.180(18)	0.044(10)
0.1275	0.137(21)	0.211(26)	0.074(31)

TABLE XI. Baryon mass splittings for $N_c = 5$.

κ	$\Delta m_B(\frac{5}{2}, \frac{3}{2})$	$\Delta m_B(\frac{5}{2}, \frac{1}{2})$	$\Delta m_B(\frac{3}{2}, \frac{1}{2})$
0.1240	0.069(5)	0.112(7)	0.043(3)
0.1252	0.087(8)	0.143(9)	0.056(4)
0.1258	0.093(7)	0.151(9)	0.059(6)
0.1260	0.098(9)	0.155(16)	0.057(12)
0.1265	0.107(9)	0.162(10)	0.055(7)
0.1270	0.119(11)	0.204(11)	0.085(8)

compute hadronic correlators, so they were generated with a different fermion action than was used to create the configurations. Thus the $SU(4)$ and $SU(5)$ data in the paper is partially quenched. All of the simulations and all of the gauge field observables presented in the paper are correct.

Since the results of the paper were generally of a qualitative nature, all conclusions are unchanged.