

NPLQCD addresses HALQCD slide(s) presented at **2018 INT workshop**

http://www.int.washington.edu/talks/WorkShops/int 18 70W/People/Aoki S/Aoki3.pdf



Due to statements by the HALQCD collaboration regarding NPLQCD's refined analysis of its 2013 data-set that were released in a Comment and a Journal article, we provide the relevant timeline with editorial comments.

Our reply 2: Reanalysis was made without mention(arXiv: ver1).* Reanalysis was mentioned in footnote/caption (arXiv: ver2). ** NPL2013 NPL2013 L = 24 NPL2013 L = 32NPL2013 L = 32 ■ NPL2013 L = 48 NPL2013 L = 48 ERE (NPL2013) ERE (NPL2013) kcot*b/m*_g 0.1 kcot0/ -0.2-0.2 -0.3-0.050.00 0.05 0.10 -0.050.00 0.10 $(k/m_{\pi})^{2}$ $(k/m_\pi)^2$ NPL2017C NPL2017C L = 32 4PL2017C L = 32 NPL2017C L = 48 NPL2017C L = 48 ERE (NPL2013) ERE (NPL2013) 0.0 kcotg/m² -0.1 -0.2 -0.1-0.2 -0.3-0.05-0.050.00 0.05 $(k/m_n)^2$ *Reanalysis posted subsequently in 1706.06550. **After this workshop, reanalysis was mentioned in the main text (arXiv: ver3).

1) A ``forthcoming article'' stated in version 1 of ``the Comment''

Posted: Thu, 25 May 2017 15:55:21 GMT (6640kb,D)

arXiv:1705.09239 [hep-lat]

bound-state pole. The uncertainty in the tangent line to the $-\sqrt{-k^{*2}}$ function at $k^{*2} = -\kappa^{(\infty)^2}$ arises from the uncertainty in the values of $\kappa^{(\infty)}$ (further discussion of this will be presented in a forthcoming article [29]). A similar conclusion can be drawn from three-parameter ERE fits. Thus

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[29] M. Wagman et al. (NPLQCD), in preparation.

[30] T. Yamazaki, K.-I. Ishikawa, Y. Kuramashi, and A. Uka.

2) Complete re-analysis arXived

Posted: Tue, 20 Jun 2017 17:06:07 GMT (7837kb,D)

- Wagman *et al*, **Baryon-Baryon Interactions and Spin-Flavor Symmetry from Lattice Quantum Chromodynamics [arXiv:1706.06550, Phys. Rev. D 96, 114510 (2017)]**

3) Comment revised to version-2

Posted: Fri, 14 Jul 2017 14:56:43 GMT (6641kb,D)

Re-analysis discussed in a footnote: arXiv:1705.09239 [hep-lat]

4) Comment revised to version-3

to address changes to HALQCD article arXiv:1703.07210. Posted: Thu, 22 Feb 2018 18:50:26 GMT (3242kb,D)

arXiv:1705.09239 [hep-lat]

Re-Analysis stressed in main text in an effort to avoid any possible future confusions on this matter.

Our analysis of two-nucleon correlation functions generated from these ensembles of gauge-field configurations has been recently refined in a comprehensive re-analysis [29], including results at additional kinematic points. This new analysis has been used in obtaining the results shown in Figs. 3 and 4. All of the energies extracted from the three lattice volumes, and the binding energies and ERE parameters subsequently obtained, are in agreement with our previous results; i.e., the differences in the mean values of the results from the previous and the new analyses are within one standard deviation as defined by the (statistical and systematic) uncertainties of the results combined in quadrature [12, 13].