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Diquark masses from AdS/QCD potential

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AdS/QCD correspondence is able to predict quark-antiquark potential in the static limit [1]. We use this piece of information together with the Salpeter equation (Schroedinger equation with relativistic kinematics) and a short range hyperfine splitting potential to determine quark masses and quark potential parameters. Assuming a quark-diquark structure for the S-wave low-lying baryons allows to determine light diquark masses. A discussion of heavy diquark masses, based on the hypothesis of a diquark-antidiquark structure for the states X(3872) and X(3940) [2] is also presented.

[1] O. Andreev and V. Zakharov, Phys. Rev. D 74 (2006) 025023 [arXiv: hep-ph/0604204].
[2] L. Maiani, F. Piccinini, A.D. Polosa, V. Riquer, Phys. Rev. D 71 (2005) 014028 [arXiv: hep-ph/0412098].

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