

Anomalous Holographic Hard Wall Model for Glueballs and the Pomeron

In this work we consider the inclusion of anomalous dimensions in the dual operators that describe glueballs in the holographic hard wall model, inspired by the AdS/CFT correspondence. The anomalous dimensions come from well known string theory analysis showing a dependence with the spin of the hadronic state. We show that this inclusion improves the glueball spectra and Regge trajectory when compared to lattice data and to the soft pomeron. We also consider a phenomenological motivated expression for the anomalous dimensions such that the glueball Regge trajectory becomes asymptotically linear with good masses and fitting the pomeron trajectory.

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