

Abstract Submitted  
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**Updated axial meson spectrum and scalar-glueball mixing in AdS/QCD** SEAN BARTZ, JOSHUA ROLLAG, Macalester College — AdS/QCD is a proposed duality between strongly-coupled quantum chromodynamics and weakly-coupled 5D gravity that can offer new insight to hadronic physics. Previous work accurately models confinement and chiral symmetry breaking in the light hadron spectrum. We improve this model by incorporating new experimental data and making predictions for the scalar glueball sector. Recent COMPASS results indicate a new light axial-vector resonance between the ground state and the currently-accepted value for the first excited state. Incorporating this data lessens the model's dependence on unphysical short length scales. In addition, we analyze the mixing between scalar mesons and glueball by computing to first approximation the radial excitation spectra of these particles. We find good experimental agreement for the scalar mesons and show that predictions for the excited glueball spectrum differ from lattice results.

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