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Hamiltonian approach to Yang-Mills theories in 2+1 dimensions: glueball and meson mass spectra. ALEXANDR YELNIKOV, Virginia Tech, ROBERT G. LEIGH, University of Illinois, DJORDJE MINIC, Virginia Tech — I will present a summary of the recently announced analytic computation of the spectrum of lowest spin glueballs and associated Regge trajectories in the planar limit of pure Yang-Mills theory in 2+1 dimensions. I will also discuss the analytic approach to the spectrum of QCD in 2+1 dimensions, as well as preliminary analytic treatment of pure Yang-Mills theory in 3+1 dimensions. The emphasis will be placed on the computations of new non-trivial ground state wave functionals in these cases and close comparisons with the available large N lattice data.

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