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The EFT of Large Spin Mesons

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As well known, mesons with large spin J in large N_c QCD can be described as rotating open strings using effective field theory (EFT). However, some subtleties arise for light quarks, due to the breakdown of the derivative expansion near the endpoints. Building on previous works on the subject, I will describe a consistent treatment of such endpoints' singularities and obtain results, in a systematic $1/J$ expansion, for the spectrum of the leading and daughter Regge trajectories. Interestingly, the redshift factor associated with the quarks' acceleration implies that the applicability regime of the EFT is smaller than for static fluxtubes. Depending on time, I will also mention some extensions of the EFT of phenomenological interests, such as the quarks' spin, and the pseudo-axion, a massive string mode identified in lattice simulations of 4d fluxtubes. Finally, I will comment on the comparison with data in 4d QCD, and discuss the prospects for applying a similar EFT to the study of the glueball spectrum in Yang-Mills theory.

Presenter: CUOMO, Gabriel