

Regge Trajectories from Pion Scattering at Large N

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I explore the Effective Field Theory bootstrap formalism, leveraging dispersion relations to establish sum rules linking low-energy scattering amplitudes to high-energy partial wave expansion. We analyze the impact of different Regge behaviors at large energies and apply the formalism to study Pion Scattering at large-N. Imposing the presence of spin-2 states, we derive a mass bound for additional higher spin states, unveiling a kink structure. Investigation at this kink reveals intriguing agreements with real-world QCD observables. Moreover, the solution's spectrum organizes into Regge-trajectory-like families.

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