

Regge Trajectories by 0-Brane Matrix Dynamics

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ABSTRACT

The energy spectrum of two 0-branes for fixed angular momentum in 2+1 dimensions is calculated by the Rayleigh-Ritz method. The basis function used for each angular momentum consists of 80 eigenstates of the harmonic oscillator problem on the corresponding space. It is seen that the spectrum exhibits a definite linear Regge trajectory behavior. It is argued how this behavior supports the picture by which the bound-states of quarks and QCD-strings are governed by the quantum mechanics of matrix coordinates.