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Regge trajectories of ordinary and non-ordinary mesons from their poles

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Our results on obtaining the Regge trajectory of a resonance from its pole in a
scattering process and from analytic constraints in the complex angular momentum plane will be presented.
The method, suited for resonances that dominate an elastic
scattering amplitude, has been applied to the rho(770), f_2(1275), f_2´(1525) and the f0(500) resonances.
Whereas for the first three we obtain linear Regge trajectories, characteristic of ordinary quark-antiquark states, for the latter we find a non-linear trajectory with a much smaller slope at the resonance mass. We also show that if a linear trajectory with a slope of typical size is imposed for the f0(500), the corresponding amplitude is at odds with the data. This provides a strong indication of the non-ordinary nature of the sigma meson.

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