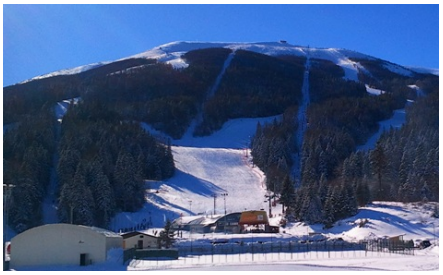

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Regge trajectory of the f0(500) resonance from a dispersive connection to its pole

Thursday 6 February 2014 09:00 (30 minutes)

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) and the f0(500) resonances. Whereas for the former we obtain a linear Regge trajectory, 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.

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