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Beyond the Standard Model (experiment and theory)

Hadron spectroscopy and exotics (experiment and theory)

Experiment: -

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Analytic Confinement and Bound States in QFT

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Abstract

We demonstrate that the conception of analytic confinement can lead to the stable bound states of constituent and carrier particles within simple relativistic quantum field models of the Yukawa interaction. At weak couplings there arise bound states of massless carriers, the excited bound states of massive quarks form asymptotically linear Regge trajectories and a mechanism of the chiral symmetry breaking takes place. The obtained results explain satisfactorily the basic properties of the observable meson and baryon spectra.

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