

Challenges in Hadron Spectroscopy

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In the Standard Model, hadron resonances emerge from the interaction between quarks and gluons. The nucleon matter is composed of baryons, three quark states, interacting via the exchange of mesons, quark-antiquark pairs.

Quantum chromodynamics predicts the existence of other types of quark configurations. They are generically called “exotic hadrons”.

During the last 15 years, experimental collaborations (LHCb, COMPASS, BESIII, GlueX,...) have observed several exotic hadron candidates: potential tetraquarks, pentaquarks and hybrid meson resonances.

In this talk, I will review challenges and prospects in discovering exotic hadrons and studying their properties.

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