

PERSPECTIVE STUDY OF EXOTICS AND BARYONS WITH CHARM AND STRANGENESS

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The spectroscopy of exotics states with hidden charm together with the spectroscopy of charmed and strange baryons is discussed. It is a good testing tool for the theories of strong interactions, including: QCD in both the perturbative and non-perturbative regimes, LQCD, potential models and phenomenological models. An understanding of the baryon spectrum is one of the primary goals of non-perturbative QCD. For this purpose an elaborated analysis of charmed hybrids and tetraquark spectrum together with spectrum of charmed and strange baryons is given. The recent experimental data are analyzed. But much more data on different decay modes are needed before firmer conclusions can be made. These data can be derived directly from the experiments using a high quality antiproton beam with momentum up to 15 GeV/c planned at FAIR and proton-proton collisions with momentum up to 26 GeV/c planned at the superconducting accelerator complex NICA that is being built in Dubna nowadays.

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