

Amplitude analysis methods for the experimental studies of multi-quark states

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Nowadays one of the urgent tasks of high energy physics is search and study of multi-quark XYZ states. Calculations obtained using Lattice QCD cannot fully describe spectrum of that states and predict parameters currently unopened states. Helicity amplitude formalism is one of the main instruments which are used in the process of amplitude analysis to measure the parameters of these states such as mass, width, spin, parity. In this report, the details of this formalism will be analyzed, as well as examples of its application in amplitude analysis of B-hadron decays in problems of searching for and studying pentaquark and tetraquark states.

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