

Experimental study of the Pentaquarks

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There were no experimental evidence for existence of a hadron with a quark configuration rather than three quarks or a quark-antiquark pair although QCD does not forbid the existence of other combination such as $qqqq\bar{q}$ or $q\bar{q}q\bar{q}$. Since the LEPS at SPring-8 collaboration reported the first evidence for the Θ^+ which has a quark configuration of $uudd\bar{s}$, extensive experimental efforts have been made to confirm the existence of the Θ^+ and other pentaquark baryons.

In my talk, I will report on the experimental evidences and counter evidences for pentaquark baryons. I will also present recent results from the LEPS deuterium data and conclude the talk with future prospects.