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Regge Trajectories of triply heavy baryons

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Ω_{ccc}, Ω_{bbb}, Ω_{ccb} and Ω_{bbc} baryons are considerable theoretical interest in a baryonic analogue of heavy quarkonium because of the color-singlet bound state of three heavy quark (c,b) combination inside ({\it free from light quarks}) \cite{olive}. Regge trajectories are concerned with the mass spectrum of the particles so that the present study exhibits the regge trajectories obtained from excited states of four experimentally unknown triply heavy Ω baryons. The trajectories are plotted in (n, M^2) and (J, M^2) planes which is helpful to determine the unknown quantum number and J^P values. The calculations have computed in Hypercentral Constituent Quark Model with hyper coulomb plus linear potential \cite{EPJC}. Many author have also study the mass spectra by different approaches\cite{brown, PAD2014, vijande2015, kwei2}. However, LHCb experiment possibly detect Ω_{bbb}, Ω_{bbc} and Ω^*_{bbc} baryons at appropriate integrated luminosity and collision energy \cite{lhcb}.

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