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Spectroscopic study of heavy-light baryons in relativistic flux tube model

Tuesday, July 11, 2023 5:20 PM (20 minutes)

In this work, we employ relativistic flux tube model to investigate the mass spectra of heavy-light baryons in quark-diquark configuration. Modified Regge relation between mass and angular momentum is derived by means of semiclassical approach in relativistic flux tube model. The mass spectra is generated by including spin dependent interactions in j-j coupling scheme. Regge trajectories in (J,Mˆ2) plane are constructed to study its properties like linearity, parallelism, and equidistant. Our prediction for ground state and excited state masses agrees well with experimentally available masses. We assign possible spin-parity quantum number to some experimentally observed states, which can offer insightful information to upcoming experimental studies.

Is this abstract from experiment?

No

Name of experiment and experimental site

N/A

Is the speaker for that presentation defined?

Yes

Details

POOJA JAKHAD, Spectroscopic study of heavy-light baryons in relativistic flux tube model, Sardar Vallabhbhai National Institute of Technology, INDIA, https://www.svnit.ac.in

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