



Contribution ID: 24

Type: Talk

Spectroscopy of light, strange mesons in Regge phenomenology

Thursday 8 September 2022 16:30 (20 minutes)

The study of light quark mesons plays a significant role both theoretically and experimentally. In the present work, the mass-spectra of the light mesons ($u\bar{s}$ and $s\bar{s}$) is systematically studied within the framework of Regge phenomenology. Several relations between Regge slope, intercept, and meson masses are extracted with the assumption of linear Regge trajectories. Using these relations ground state masses (1^2S_0 and 1^3S_1) of the pure $s\bar{s}$ states are evaluated. Further, the Regge slopes for 1^2S_0 and 1^3S_1 trajectories are extracted in the (J, M^2) plane to obtain the orbitally excited state masses for these mesons. Similarly, the values of Regge parameters are calculated in the (n, M^2) plane for each Regge line and the obtained the radially excited state masses of mesons lying on that Regge trajectory. The main purpose to study the $s\bar{s}$ meson is that some of the reported exotic states may be the excited or mixed state of strangeonia. The obtained mass spectra could provide useful information in the future experimental searches.

Is this abstract from experiment?

No

Name of experiment and experimental site

NA

Is the speaker for that presentation defined?

Yes

Details

Juhi Oudichhya, Ph. D student at Department of physics, Sardar Vallabhbhai National Institute of technology, Surat, Gujarat, India.
www.svnit.ac.in

Internet talk

Maybe

Authors: RAI, Ajay Kumar (Sardar vallabhbhai National Institute of Technology-Surat); OUDICHHYA, Juhi

Presenter: OUDICHHYA, Juhi

