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Bottomonium: Properties and Decays in Non-Relativistic Framework

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The mass spectra of bottomonium $b\bar{b}$, is calculated using Cornell potential in a non-relativistic framework, with spin dependent corrections corresponding to the spin-orbit, spin-spin and tensor interactions added perturbatively. The radial and orbital Regge trajectories are also studied for the same. Further, we estimated the wave function at the origin to predict the decay widths of bottomonium states annihilating to leptons and photons. The obtained masses of the bottomonium states are compared and found to be in excellent agreement with experimental results. Also, we investigate the effect of various model parameters on the prediction of annihilation decay widths.

Session

Quark and Lepton Flavour Physics

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