Mass spectra of Bottomonia using relativistic corrections to the potential

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We compute the masses of different states of bottomonia in the framework of potential non-relativistic QCD (pNRQCD), non-perturbatively. The potential consists of two terms, a static term incorporating Coulombic plus confinement part along with a constant and a relativistic correction term classified in powers of the inverse of heavy quark mass \textit{O}(1/m). The \textit{O}(1/m) Spin dependent corrections are incorporated to compute the singlet and the triplet states of bottomonia. The Schr\"{o}dinger equation is solved numerically to obtain the masses from 1S to 6S states, the calculated masses for $\eta_b(1S)$ is 9.390 GeV and for (1S) is 9.459 GeV and is found to be in good accordance with the experimental results.

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