Bottomonium System

Updated March 2024.



The level scheme of meson states containing a minimal quark content of $b\overline{b}$ and having S = C = B = 0. The name of a state is determined by its quantum numbers $I^G J^{PC}$ (see the review "Naming Scheme for Hadrons"). States included in the Summary Tables are shown with solid lines; those requiring confirmation are shown with dotted lines. The arrows indicate the most dominant hadronic transitions. Single photon transitions, including $\Upsilon(nS) \to \gamma \eta_b(mS)$, $\Upsilon(nS) \to \gamma \chi_{bJ}(mP)$, and $\chi_{bJ}(nP) \to \gamma \Upsilon(mS)$, are omitted for clarity. For orientation, the location of the thresholds related to a pair of ground state open bottom mesons is indicated in the figure. Decays to open flavour final states are not shown in the figure. The transitions $\Upsilon(10753) \to \omega \chi_{b1}(1P), \omega \chi_{b2}(1P)$ have also been reported.

R.L. Workman et al. (Particle Data Group), Prog.Theor.Exp.Phys. **2022**, 083C01 (2022) and 2023 update May 4, 2024 18:01