## 98. The Bottomonium System



The level scheme of the $b \bar{b}$ states showing experimentally established states with solid lines. Singlet states are called $\eta_{b}$ and $h_{b}$, triplet states $\Upsilon$ and $\chi_{b J}$. In parentheses it is sufficient to give the radial quantum number and the orbital angular momentum to specify the states with all their quantum numbers. E.g., $h_{b}(2 P)$ means $2^{1} P_{1}$ with $n=2, L=1$, $S=0, J=1, P C=+-$. The figure shows observed hadronic transitions. The single photon transitions $\Upsilon(n S) \rightarrow \gamma \eta_{b}(m S), \Upsilon(n S) \rightarrow \gamma \chi_{b J}(m P)$, and $\chi_{b J}(n P) \rightarrow \gamma \Upsilon(m S)$ are omitted for clarity.

