

UPPER LIMIT FOR $J/\psi \rightarrow \gamma + (\text{INVISIBLE})$

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ABSTRACT

The CLEO-c $\psi(2S)$ data were used to study the branching fraction for J/ψ radiative decay to weakly interacting neutral final state particles. The measured 90% confidence level upper limit for invisible decay is 3.65×10^{-6} . This result provides a strong constraint for dark-matter models that require light neutralinos to annihilate through a light boson. Data were acquired with the CLEO-c detector at the CESR e^+e^- symmetric collider.