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Search for invisible decays at BESIII

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BESIII has collected 448.2 M $\psi(3686)$ data set and 10 B J/ψ data set. The huge clean data sample provide an excellent chance to search for new physics. We report the search for decay $J/\psi \to \gamma + invisible$, which is predicted by next-to-minimal supersymmetric model. Without significant signal found, we gave around 6.2 times better upper limits than previous CLEO-c's results. In addition, we report the preliminary result of the first search for the invisible decay of Λ . This invisible decay is predicted by the mirror matter model which could explain the 4σ discrepancy in neutron lifetime measurement results from the beam method and bottle method.

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