

Search for di-muon decays of a low-mass Higgs boson in the radiative decay of J/ψ

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We search for di-muon decays a light Higgs boson (A^0) in the radiative decay of J/ψ : $J/\psi \rightarrow \gamma A^0$, $A^0 \rightarrow \mu^+ \mu^-$. Here A^0 is the hypothetical CP-odd light Higgs boson predicted by many extensions of the Standard Model (SM), including Next-to-Minimal Supersymmetric Standard Model (NMSSM). This study is based on 225 million J/ψ events collected in 2009 by the BESIII experiment at the Institute of High Energy Physics, Beijing, China. We are studying the process and we will report the preliminary results of the work in this talk.

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