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Dark sector search at BESIII

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The BESIII experiment is a symmetric e^+e^- collider operating at c.m. energy from 2 to 4.95 GeV. With the world' s largest data set of J/ψ (10 Billion), $\psi(2S)$ (2.6 Billion), and about $25fb^{-1}$ scan data from 3.77 to 4.95 GeV, we are able search various dark sectors produced in e^+e^- annihilation and meson decay processes. In this talk, we report the recent search for dark photon candidate in $J/\psi \to e^+e^-\eta/\eta'$, $e^+e^- \to \gamma A' \to \mu^+\mu^-/e^+e^-$, $e^+e^- \to \gamma + invisible$ process. In addition, a possible light Higgs A_0 in $J/\psi \to \gamma A_0$ process is also searched.

Category

talk

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