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Search for dark sector at BESIII

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The BESIII experiment is taking data at a symmetric e^+e^- collider operating at the center of mass energies from 2.0 to 4.95 GeV. With the world's largest on-threshold production data set of J/ψ (10 billion), $\psi(3686)$ (2.6 billion), and 20 fb^{-1} of $\psi(3770)$ decaying into D meson pairs, we are able to search for various dark sectors particles produced in e^+e^- annihilation and meson decay processes. In this talk, we report the search for BSM particles in Σ decay and Axion-like particle search with J/ψ data. The search for massless dark photon through the FCNC process $D^0 \rightarrow \omega\gamma'$ and $D^0 \rightarrow \gamma\gamma'$, and K_s^0 invisible decay will also be presented.

Secondary track

T09 - Beyond the Standard Model

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