

Search for dark sector at BABAR

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Many models of dark matter and hidden sectors predict new particles with masses below the electroweak scale. Low-energy electron-positron colliders such as BABAR are ideally suited to discover these hidden-sector particles. We present two recent BABAR searches for low-mass hidden-sector particles, including new searches for prompt and long-lived leptonically decaying hidden scalars produced in association with tau leptons. This search is sensitive to viable models that could account for the muon $g-2$ excess. We also present results of a search for dark matter bound states (darkonium). These examples show the importance of e^+e^- -factories in constraining and discovering new hidden-sector physics beyond the Standard Model.

What is your topic?

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