

Searches for Hidden Sectors with BABAR

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Many models of physics beyond the Standard Model (SM) predict new, hidden-sector particles with masses below the electroweak scale. These models are motivated by solutions to the dark matter problem, the hierarchy problem, neutrino masses, and other physics that is not accounted for in the SM. Low-energy electron-positron colliders such as BABAR are ideally suited to discover these hidden-sector particles. We present several BABAR searches for low-mass hidden-sector particles, including visibly and invisibly decaying dark photons, and a dark muonic force. These examples show the importance of B-factories in discovering and constraining new hidden-sector physics beyond the SM.

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BABAR

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