Contribution ID: **836** Type: **Talk**

Recent Searches for Hidden-Sector Particles with BABAR

Tuesday, 28 July 2020 17:00 (25 minutes)

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 several 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 a search for dark muonic forces, and for invisible particles produced in six-quark final states. These examples show the importance of B-factories in constraining and discovering new hidden-sector physics beyond the Standard Model.

I read the instructions

Secondary track (number)

09 Dark matter detection

Primary author: ANULLI, Fabio (Sapienza Universita e INFN, Roma I (IT))

Presenter: LI, Yunxuan (California Institute of Technology)

Session Classification: Dark Matter Detection

Track Classification: 09. Dark Matter Detection