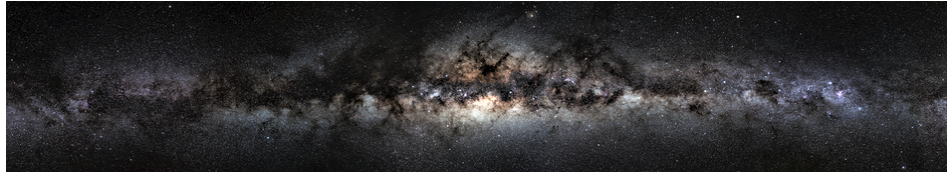


Dark Sectors of Astroparticle Physics (AstroDark-2021): Axions, Neutrinos, Black Holes and Gravitational Waves



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Recent Searches for Dark Sectors and Axion-Like Particle with BABAR

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Many scenarios of physics beyond the Standard Model predict new particles with masses well below the electroweak scale. Low-energy, high luminosity colliders such as BABAR are ideally suited to discover these particles. We present several recent searches for low-mass dark sector particles at BABAR, including leptonphilic scalars, new gauge bosons coupling only to the second and third generation of leptons, and axion like particles produced in B decays. We also present recent result of a search for dark matter bound states (darkonium). These examples show the importance of B -factories in constraining and discovering new dark-sector physics beyond the Standard Model.

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