

Detecting Axion-Like Particles with Primordial Black Holes

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Asteroid-mass primordial black holes (PBH) can make up a fraction or all of dark matter. Their Hawking radiation process offers a novel channel to produce new particles, which is especially interesting if these particles are mostly secluded from the Standard Model sector. Future MeV gamma-ray telescopes provide exciting prospects for detecting the Hawking radiation signal from asteroid-mass PBHs. In this talk, I will first introduce the indirect detection searches for PBHs, and discuss how to distinguish the signal from PBH-produced axion-like particles in the gamma-ray spectrum.

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