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Light axino dark matter and freeze-in production

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I consider the keV scale axino dark matter in the supersymmetric Dine-Fischler-Srednicki-Zhitnitsky (DFSZ) axion model. The axino dark matter is dominantly produced from freeze-in processes, and it decays into a monochromatic photon that can be measured by X-ray observations. However, keV scale dark matter normally has a tension with the constraints from Ly-alpha forest data. In this talk, I will present details of the freeze-in production of DFSZ axino dark matter that relieves the tension. I will also discuss how the bilinear R-parity violation lead to axino dark matter decay.

Parallel Session

Dark Matter, Astroparticle Physics

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