

Flavor Probes of Axion Dark Matter

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Standard Model extensions with light axions are well-motivated by the observed Dark Matter abundance and the Peccei-Quinn solution to the Strong CP Problem. In general such axions can have large flavor-violating couplings to SM fermions, which naturally arise in scenarios where the Peccei-Quinn symmetry also explains the hierarchical pattern of fermion masses and mixings. I will discuss how these couplings allow for efficient axion production from the decays of SM particles, giving the opportunity to probe flavored axion Dark Matter with precision flavor experiments, astrophysics and cosmology.

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