

## Measurement of the Mass of the Axion to 44 ppm

A simple yet compelling picture for the nature of the axion is presented. The picture implies that axions form the dark matter in the universe with cosmological number density six times the photons in the cosmic microwave background, mass about one million times less than the electron, and decay constant roughly one hundred million times more than the pion. Direct resonant production of axions in a straightforward tabletop optical experiment is reported from which the mass of the axion is determined to 44 parts per million precision.

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