

PRISMA+ Colloquium

Oct. 25, 2023 at 1 p.m.
Lorentz-Raum, 05-127, Staudingerweg 7

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From Axion Dark Matter to Things that are not even Particles

In this talk we start with the classical example of an oscillating cosmological field axion and axion-like particle dark matter. We will see that it is a suitable dark matter candidate, albeit one with interesting wave-like features that express themselves as coherent oscillations. We discuss existing and future probes of this type of dark matter. Following the theme of probing tiny oscillations we go beyond dark matter and even beyond particles and ask whether there could be a fundamental violation of Poincare invariance and study tests of this fundamental symmetry by looking for time-varying and oscillating effects.