

›Allgemeines Physikalisches Kolloquium

> Donnerstag, 27.06.2019 um 16 Uhr c.t.

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Could the Dark Matter be the QCD Axion

Firstly, I will review the evidence that the Universe is full of dark matter, which outweighs ordinary neutron-proton-electron matter by a factor of 5. Then I will present a seemingly unrelated issue: the strong interactions respect time-reversal invariance, even though they could easily violate this symmetry a billion times more strongly. A hypothetical particle, the Axion, could explain both puzzles. I discuss the physics of the Axion in the early Universe, leading to a prediction for this particle's mass if it makes up the Dark Matter.