



PHYSICS AND ASTRONOMY COLLOQUIUM

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“Recent Progress (or lack thereof) in Direct Searches for Dark Matter”

Abstract

We will review the landscape of this active field of research, covering both recent hints of possible detection, and negative results. I'll try to communicate the many difficulties we presently encounter when attempting to pinpoint a common origin for the several observed anomalies, or assessing their tension with existing exclusion limits. These include systematics affecting the operation of the detectors, our knowledge of their response to low-energy nuclear recoils, astrophysical uncertainties, and the broad range of particle couplings that can mediate the interaction of a Weakly Interacting Massive Particle with a detector target.