Nuclear Seminar

Feb 21st @ 4:00 PM in RM 220

Searching for Light Dark Matter

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The common assumption about dark matter is that it consists of relatively heavy, neutral, weakly-interacting particles. This assumption has been challenged recently by a new model positing a very light particle - lighter than the pion, for example. We have proposed a low-energy scattering experiment which can produce such particles and provide a definitive test of this model. I will review the premises of the light dark matter model and explain its motivations. I will also consider a possible indirect signal for this model. Finally, I will describe the proposed experiment as well as a possible follow-up experiment meant to detect relic dark matter particles directly.