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The Current Status and Prospects for Direct Dark Matter Searches

Monday, 27 August 2018 16:00 (30 minutes)

Direct detection experiments seek to detect dark matter though its scattering off nuclei in terrestrial detectors. Over the last decade direct detection dark matter experiments have made remarkable progress in searching for the constituents of the dark matter that makes up ~80% of the matter density of the Universe. Experiments using liquid noble elements are quickly approaching a regime where they will encounter an irreducible neutrino background while solid state device is pushing bounds searching for dark matter candidates of lower masses. In this talk, I will review the motivation for the direct detection of dark matter, discuss a variety of challenges faced by experimenters trying to directly detect dark matter and review recent results from leading direct detection experiments.

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