

# Theoretical prospects for directional dark matter detection

*Tuesday 23 June 2015 10:00 (25 minutes)*

Direct detection of WIMPs where the direction of nuclear recoils is measured presents an exciting opportunity for studying the physics and astrophysics of WIMPs. Additionally, directionality offers crucial information that distinguishes a WIMP signal from the irreducible background to direct detection, neutrinos. I will describe work assessing the theoretical capabilities of future generations of directional detectors including searching for non-standard velocity distributions of WIMPs in the Milky Way and how directional detectors can help circumvent the encroaching neutrino floor.

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