

# Novel light dark matter signals in xenon direct detection experiments

*Wednesday, August 29, 2018 4:30 PM (0:15)*

## Abstract content

Direct detection experiments that utilise xenon have proven to be most sensitive for heavy ( $>5$  GeV) dark matter particles. In this talk, I'll explore signals that allow xenon experiments to probe the dark matter - nucleon cross section for dark matter particles down to  $\sim 100$  MeV. These signals arise from electron or photon emission from the xenon atom after a collision with a light dark matter particle. This talk is based on arXiv:1702.04730 and arXiv:1711.09906.

**Primary author(s) :** Dr. MCCABE, Christopher (King's College London)

**Presenter(s) :** Dr. MCCABE, Christopher (King's College London)

**Session Classification :** Dark Matter

**Track Classification :** Dark Matter