

TUESDAY

DECEMBER 1

4:00 P.M.

RM 415 NSH

Boosting dark matter indirect detection with black holes

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Super-massive black holes that grow at the center of dark matter halos distort the dark matter within their zone of influence into a localized density spike. This spike can give rise to strong enhancements of standard indirect detection signals, and can lead to qualitatively new windows onto the physics of the early universe. I will talk about potential dark matter signals from the Milky Way's central black hole, some astrophysical caveats, and the possible use of black holes as dark matter accelerators.