

## Consistent Models of Dark Matter at the LHC

*Thursday 5 April 2018 14:00 (15 minutes)*

We study universal properties of dark matter models with a pseudoscalar mediator at the Large Hadron Collider. A simplified model with a second Higgs doublet and effective couplings to the dark sector is investigated. Constraints from Higgs signal strength measurements, flavor and electroweak precision observables are considered. The remaining parameter space overlaps with a region in which the observed relic density can be reproduced. We analyze possible missing transverse energy signatures. For a large set of parameters, due to a resonant enhancement, the mono- $Z$  channel provides stronger limits than mono-jet searches. We emphasize that these mono- $X$  searches are complementary to direct and indirect detection experiments.

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