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# Semi-visible Dark Matter Signatures

*Saturday, November 26, 2022 4:00 PM (2 hours)*

The existence of dark matter has been known for many decades, but its nature remains one of the biggest mysteries of our Universe, suggesting new physics beyond the Standard Model. We consider a class of models that introduces new, dark particles that are strongly coupled to each other and only coupled to the Standard Model through a new massive exchange particle. The dark particles can potentially explain the dark matter abundance in our Universe, while the new exchange particle can be produced in high-energy particle collisions and result in signatures that are partially invisible and therefore distinctively different from standard model signatures. We study this class of models in the context of new data from dedicated searches at the LHC and discovery potential at future searches and experiments.

## Category

Particle / Astroparticle / Cosmology (Theory)

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