## MOCa 2022: Materia Oscura en Colombia



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## Dark matter from dark photon signal classification at DUNE near detector with machine learning

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We study a scalar dark matter (DM) model with two DM species coupled to the Standard Model (SM) particles via a sub-GeV dark photon. The two DM candidates can be produced at fixed-target experiments a la Beam- Dump. We used machine learning techniques to distinguish signal from background and explored the potential reach in the sensitivity of DUNE near detector.

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