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# Radiative Corrections to the Direct Detection Process of Higgsino-like Dark Matter

*Wednesday 7 December 2022 13:00 (30 minutes)*

In the R-parity conserving Minimal Supersymmetric Standard Model (MSSM)
the Lightest Supersymmetric Particle (LSP) is a well-motivated dark matter (DM) candidate.
From the perspective of naturalness, light Higgsino-like neutralino states are favored and have been studied widely in the literature. In this presentation, we focus on the direct detection prospects for light higgsino-like neutralino DM. In particular, we have studied certain classes of one-loop radiative corrections to the spin-independent direct detection cross-section, which contributes significantly to the same. This is especially so in the parameter space where (almost) pure higgsino is the LSP, thanks to its suppressed coupling with the Higgs bosons.
Further, we comment on the implications for the mu parameter in light of recent data from spin-independent direct detection.

**Primary authors:** Dr CHATTERJEE, Arindam (Shiv Nadar Institution of Eminence, Greater Noida); PASHA, Syed adil (Shiv Nadar University, Greater Noida)

**Presenter:** PASHA, Syed adil (Shiv Nadar University, Greater Noida)