Contribution ID: **150** Type: **Talk (closed)**

Singlet-Triplet Higgs Portal Dark Matter

Wednesday 25 July 2018 15:30 (20 minutes)

We investigate the phenomenology of fermion dark matter as an admixture of weak singlet and triplet Majorana fields. Our model can be considered as a generalization of the wino-bino scenario in supersymmetry. The dark sector interacts with the Higgs boson through a pseudo-scalar portal, thus mitigating bounds from direct detection experiments. The observed dark matter abundance is obtained from active co-annihilation involving this portal or from pair annihilation through the Higgs resonance during thermal decoupling. This points to a dark sector around the weak scale, which can be probed at high-energy colliders. We explore collider signals with soft leptons and missing energy at the LHC and make predictions for future searches.

Parallel Session

Dark Matter, Astroparticle Physics

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Session Classification: Dark Matter, Astroparticle Physics