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The Z5 model of two-component dark matter

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In this talk we present the phenomenology of the Z5 model for two-component dark matter. This model, which can be seen as an extension of the well-known singlet scalar model, features two complex scalar fields–the dark matter particles–that are Standard Model singlets but have different charges under a Z5 symmetry. The interactions allowed by the Z5 give rise to novel processes between the dark matter particles that affect their relic densities and their detection prospects.
Dark matter masses below the TeV are still compatible with present data, and current and future direct detection experiments may be sensitive to signals from both dark matter particles.

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