

## Multi-component dark matter

*Tuesday 15 November 2022 11:10 (50 minutes)*

The dark matter may consist not of one elementary particle but of different species, each of them contributing a fraction of the observed dark matter density. Scenarios for multi-component dark matter based on a single  $Z_N$  ( $N \geq 4$ ) symmetry are simple and well-motivated. In this talk we will discuss the phenomenology of several two component dark matter models and analyze their detection prospects. We will show that, thanks to the new interactions allowed by the  $Z_N$  symmetry, current experimental constraints can be satisfied over a wider range of dark matter masses, and that these scenarios may lead to observable signals in direct and indirect detection experiments.

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