

Spectator Dark Matter <<https://bit.ly/2Ezq4Nw>>

Tuesday 28 May 2019 16:00 (20 minutes)

The observed dark matter abundance in the Universe can be fully accounted for by a scalar field that was light during cosmic inflation and has sufficiently strong self-coupling. In this scenario, dark matter was produced in a somewhat non-standard way: by amplification of quantum fluctuations of the scalar field during inflation. The self-interaction of the field suppresses its fluctuations on large scales, and therefore avoids cosmological isocurvature constraints. The scenario does not require any fine-tuning of parameters. I will also discuss ways to test the scenario.

Primary authors: TENKANEN, Tommi (Johns Hopkins University); Dr MARKKANEN, Tommi (Imperial College London); Prof. RAJANTIE, Arttu (Imperial College London)

Presenter: TENKANEN, Tommi (Johns Hopkins University)