

## Dark branes for PTA signal and dark matter

*Saturday 4 May 2024 09:00 (20 minutes)*

The Pulsar Timing Array signal at the nHz frequency can be described by the first order phase transition of a conformal sector with a confinement scale around the GeV. We model this effect in a 5D warped theory with an IR dark brane at the GeV scale. The dark sector, located in the dark brane, interacts only gravitationally with the SM. A simple model of a fermionic dark matter is presented, with the correct relic density and passing all direct (but outside the neutrino floor) and indirect dark matter measurements. The mass window for both successful dark matter (and PTA signal) is between 150 MeV and 2 GeV.

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**Session Classification:** Talks