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Cosmological Relaxation from Dark Fermion Production

Wednesday, 4 December 2019 17:00 (30 minutes)

We consider the cosmological relaxation solution to the electroweak hierarchy problem using the fermion production as a dominant friction force. In our approach, neither super-Planckian field excursions nor a large number of e-folds arise, and scanning over thermal Higgs mass squared is avoided. The produced fermions from the relaxion source through the derivative coupling are SM-singlets, what we call dark fermions, and they can serve as the keV scale warm dark matter candidates.

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Session Classification: Afternoon session II