

VISHnu: flavour-variant DFSZ axion model for inflation, neutrino masses, dark matter and baryogenesis

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The nuDFSZ model identifies the Peccei-Quinn scale with the type-I seesaw scale, so accommodates neutrino mass generation and baryogenesis via leptogenesis. It also features axion dark matter, and of course solves the strong-CP problem. In this talk I will introduce VISHnu, a modification of nuDFSZ that uses flavour-dependent Higgs Yukawa couplings to (i) remove the usual DFSZ cosmological domain wall problem, and (ii) add inflationary dynamics, thereby progressing the scenario towards having a complete and successful cosmological history.

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