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More Axion Stars from Strings

Monday 10 June 2024 11:30 (45 minutes)

We show that if dark matter consists of QCD axions in the post-inflationary scenario more than ten percent of it efficiently collapses into Bose stars at matter-radiation equality. Such a result is mostly independent of the present uncertainties on the axion mass. This large population of solitons, with asteroid masses and Earth-Moon distance sizes, might plausibly survive until today, with potentially interesting implications for phenomenology and experimental searches.

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