

Axions in a highly protected gauge symmetry model

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I will present QCD axion or cosmological Goldstone bosons, such as ultra-light dark matter or quintessence, in a model with global symmetry highly protected by gauge symmetries. The global symmetry is accidental, obtained from an abelian quiver with scalar bifundamental fields. The Goldstone boson mass may receive explicit breaking contributions, but these are already much suppressed for a few quiver sites if the gauge charges of the scalars are appropriately chosen. The model can be obtained by latticizing an abelian 5d gauge theory on the linear dilaton background.

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