

# Singlet scalar dark matter effects on Higgs boson driven inflation

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A minimal candidate for dark matter is provided by a single standard model singlet. The quantum mechanical effects of this singlet are explored in a model where the Higgs boson has a large non-minimal coupling to the Ricci scalar and plays the role of the inflaton. Imposition of the slow roll inflation cosmological constraints restricts the allowed values of the Higgs boson mass, its coupling to the dark matter and the dark matter self-coupling.

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