

# Dark radiation constraints on hidden gauge-axion system

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The dynamics of hidden gauge fields coupled with an axion field during inflation is an interesting source of primordial gravitational wave perturbations. For a large axion decay constant, the subdominant energy density of the axion field would be transformed to that of the extra radiation of the hidden gauge bosons by the axion decay. Part of parameter space of such a model will be tested by future measurements.

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