Non-Abelian gauge preheating ZACHARY WEINER, PETER AD-
SHEAD, University of Illinois Urbana-Champaign, TOM GIBLIN, Kenyon College
— We study preheating in models where a scalar inflaton is directly coupled to a
non-Abelian $SU(2)$ gauge field. In particular, we examine $m^2\phi^2$ inflation with a
conformal, dilatonlike coupling to the non-Abelian sector. We describe a numerical
scheme that combines lattice gauge theory with standard finite difference methods
applied to the scalar field. We show that a significant tachyonic instability allows
for efficient preheating, which is parametrically suppressed by increasing the non-
Abelian self-coupling. Additionally, we comment on the technical implementation
of the evolution scheme and setting initial conditions.

Zachary Weiner
Univ of Illinois - Urbana

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