Cosmological Phase Transition of Spontaneous Confinement MA-
JID EKHTERACHIAN, KAUSTUBH AGASHE, University of Maryland, College
Park, PEIZHI DU, Stony Brook University, SOUBHIK KUMAR, RAMAN SUN-
DRUM, University of Maryland, College Park — The dynamics of a cosmological
(de)confinement phase transition is studied in nearly conformally invariant field the-
ories, where confinement is predominantly spontaneously generated and associated
with a light dilaton field. We show how the leading contribution to the transition rate
can be computed within the dilaton effective theory. In the context of Composite
Higgs theories, we demonstrate that a simple scenario involving two renormalization-
group fixed points can make the transition proceed much more rapidly than in the
minimal scenario, thereby avoiding excessive dilution of matter abundances gener-
ated before the transition. The implications for gravitational wave phenomenology
are discussed.

Majid Ekhterachian
University of Maryland, College Park

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