

# Cosmological phase transitions in the Holographic models for the composite Higgs boson

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The composite Higgs boson scenario assumes the existence of a new strongly coupled gauge sector with a softly broken approximate hyperflavor symmetry. At low energies the corresponding dynamics may be studied with help of the holographic techniques inspired by AdS/QCD. We present the bottom-up soft-wall holographic model that admits a first-order phase transition and, using a perturbation theory near the critical point, describe the production of the gravitational wave background by bubble nucleation processes in the thin-wall approximation. We also employ the approximation of the large number of spacetime dimensions to describe inhomogeneous black hole solutions dual to the gauge sector behavior in the bubble wall.

## Paper info

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