



Contribution ID: 69

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Avoided Deconfinement in Randall-Sundrum Models

Wednesday 16 December 2020 14:00 (30 minutes)

In this talk I will discuss first order phase transitions in Randall-Sundrum models which are dual to (de)confinement phase transitions in large- N gauge theories. The transition rate is suppressed by a factor $\exp(-N^2)$, and does not complete for $N \gg 1$, leading to an eternally inflating phase. The constraint on N to avoid this fate is strong enough that the RS effective field theory is only marginally under control. We present a mechanism where the IR brane remains stabilised at very high temperature, so that the theory stays in the confined phase at arbitrarily high energies. This mechanism of avoided deconfinement is similar to Weinberg's symmetry non-restoration mechanism. Avoided deconfinement allows for a viable cosmology for parametrically large- N theories. Early universe phenomena such as WIMP freeze-out, axion abundance, baryogenesis and phase transitions are qualitatively modified in the model, leading to new possibilities for phenomenological applications.

Would you be interested in receiving feedback on your talk?

Yes

Will you be pre-recording your talk?

No

Length of talk

15-25 minutes

Are you happy for your talk to be recorded?

Yes

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