



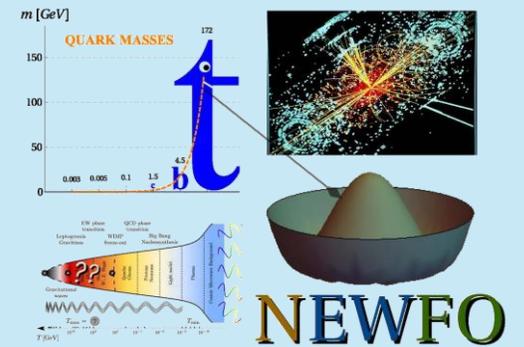
Baryogenesis from Composite Higgs Models

Aika Marie Tada

*with
A. Angelescu, F. Goertz*

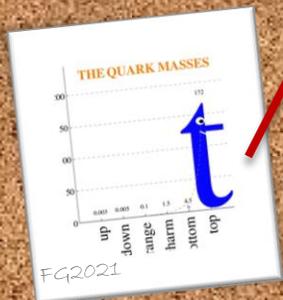
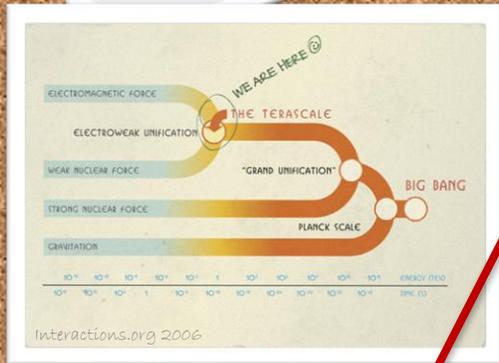


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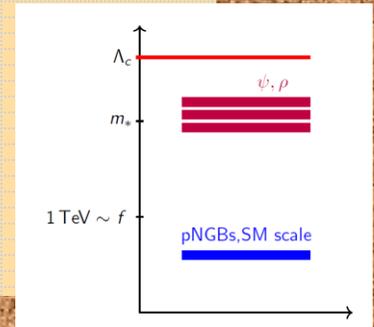
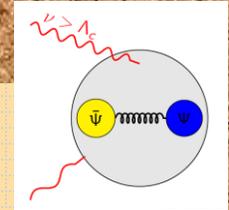
A vertical tear in a yellow sheet of paper, revealing a teal background. The tear is jagged and runs from the top to the bottom of the image. The yellow paper is on the left, and the teal background is on the right.

Where is all the
antimatter?



Composite Higgs Models (Rev.: Panico+Wulzer)

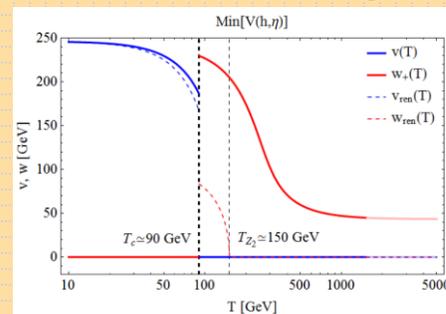
- Solves Hierarchy Problem:
Higgs as **composite** + **pseudo-Goldstone** boson of global SSB
- Interactions with SM explicitly break global symmetry
- $v(H)$ calculable from symmetry arguments
- $SO(6)/SO(5)$: add. scalar singlet

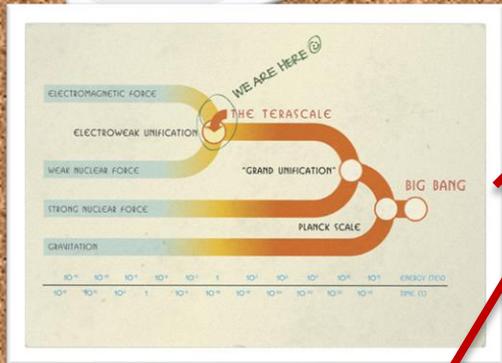


Baryon Asymmetry in the Universe

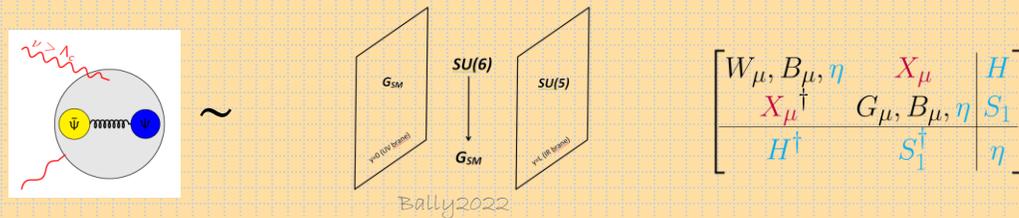
(Chala, Espinosa, Delle Rose, ...)

1. B violation ✓ EW Sphalerons
2. C and CP violation
✓ pseudoscalar singlet $i\bar{t}hSt$
3. Non-Reversible
✓ Strong first order phase transition
+ \mathbb{Z}_2 Non-Restoration [2112.12087]





SU(6) Gauge-Higgs GUT [2208.13782]



- unification in bulk gauge field, assuming warped extra dimension
- Correct SM spectrum + flavour hierarchies
- Scalar singlet and leptoquark
- Analytic potential from 5D equations of motion



Baryon Asymmetry in the Universe?



Thank you!



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