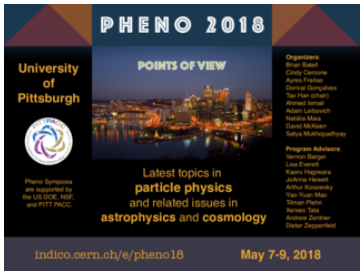

Contribution ID: **492** Type: **parallel talk**

Heavy-Lifting of Gauge Theories by Cosmic Inflation

Tuesday 8 May 2018 16:45 (15 minutes)

Future measurements of primordial non-Gaussianity (NG) can reveal cosmologically produced particles with masses of order the inflationary Hubble scale, which can be as high as $\sim 10^{14}$ GeV. I will describe how (partially) Higgsed gauge theories, naturally having particles with Hubble scale masses, can leave observable signatures in future NG measurements giving us a chance to do spectroscopy of masses and spins of such particles. In particular, a "heavy-lifting"mechanism will be analyzed in which couplings to curvature can result in Higgs scales of order the Hubble scale during inflation while reducing to far lower scales in the current era, where they may now be accessible to collider and other laboratory experiments. Such a mechanism is testable in the sense that renormalization-group running of terrestrial measurements can yield predictions for cosmological NG.

Summary

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