

Phenomenology 2018 Symposium



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Finding an EFT for Nearly Conformal Gauge Theories

Monday 7 May 2018 15:00 (15 minutes)

Recent lattice calculations have shown that confining gauge theories with a number of light fermion flavors just below the critical value for transition to infrared conformal behavior possess a light scalar composite state. Such nearly conformal gauge theories could be responsible for the breaking of electroweak symmetry with the light scalar interpreted as a Composite Higgs. Finding a reliable EFT description of the lowest mass states in these gauge theories would aid the understanding of their phenomenology. I will talk about recent work in which lattice data from two different nearly conformal gauge theories were fitted to dilaton EFTs and similarities between the fit results were identified. An EFT based on the linear sigma model could also be a good low energy description. Different power counting schemes for this EFT and their physical consequences will be outlined.

Summary

Based in part on arXiv:1711.00067

Authors: INGOLDBY, James (Yale University); GASBARRO, Andrew (Yale University); Prof. APPELQUIST, Thomas (Yale University); Prof. PIAI, Maurizio (Swansea University); LATTICE STRONG DYNAMICS COLLABORATION

Presenter: INGOLDBY, James (Yale University)

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