

Global First of Direct Dark Matter Effective Field Theories with GAMBIT

Monday, 12 July 2021 14:30 (15 minutes)

GAMBIT (the Global and Modular Beyond-the-standard-model Inference Tool) is a flexible and extensible framework that can be used to undertake global fits of essentially any BSM theory to relevant experimental data sets. Currently included in code are results from collider searches for new physics, cosmology, neutrino experiments, astrophysical and terrestrial dark matter searches, and precision measurements. In this talk I will begin with a brief update on recent additions to the code and then present the results of a recent global fit that we have undertaken. In this study, we simultaneously varied the coefficients of 14 EFT operators describing the interactions between dark matter, quarks, gluons and the photon, in order to determine the most general current constraints on the allowed properties of WIMP dark matter.

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No

Primary author: CORNELL, Jonathan (Weber State University)

Presenter: CORNELL, Jonathan (Weber State University)

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