GAMBIT: Global And Modular BSM Inference Tool
Physics Goals and Plans

1 Theories and Observables

GAMBIT will not be specific to any particular BSM theory or observable. The code is designed to allow definition and eventual global fitting of an arbitrary new BSM model, using arbitrary new data, with as little code modification as possible. This will allow users to implement their own models with ease. GAMBIT is ultimately intended to officially support as many BSM models, observables and datasets as possible, through both in-house development and user-developed contributions.

2 Initial models to analyse

Assuming an alternative model is not discovered (or hinted at) in the next year or so, the first analysis will target the MSSM-25, and look at some smaller-dimensional subset if that ends up being computationally intractable. For the purposes of keeping our code development sufficiently general, this will be developed in parallel with an option to analyse UED models. This might constitute the second paper (or a model comparison between the MSSM and UED frameworks).

Later models should include generalised effective operator combinations, various Two Higgs Doublet models, specific SUSY-breaking schemes, assorted effective dark matter theories, and eventually, even neutrino-mass and GUT models.