

GAMBIT

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I give an update on GAMBIT, the Global And Modular BSM Inference Tool [1]. After briefly describing the main features of the GAMBIT code [2]-[8], I highlight why GAMBIT is a promising framework to isolate sign of physics beyond the standard models (BSM) of particle physics and cosmology [9]-[20]. Then I show the latest GAMBIT results for a model where the gravitino, and the lightest neutralinos and charginos are the only light sparticles in the Minimal Supersymmetric Standard Model.

- [1] P. Athron *et al.* [GAMBIT], Eur. Phys. J. C **77** (2017) no.11, 784 [arXiv:1705.07908 [hep-ph]].
- [2] C. Balázs *et al.* [GAMBIT], Eur. Phys. J. C **77** (2017) no.11, 795 [arXiv:1705.07919 [hep-ph]].
- [3] F. U. Bernlochner *et al.*, Eur. Phys. J. C **77** (2017) no.11, 786 [arXiv:1705.07933 [hep-ph]].
- [4] T. Bringmann *et al.*, Eur. Phys. J. C **77** (2017) no.12, 831 [arXiv:1705.07920 [hep-ph]].
- [5] P. Athron *et al.*, Eur. Phys. J. C **78** (2018) no.1, 22 [arXiv:1705.07936 [hep-ph]].
- [6] G. D. Martinez *et al.*, Eur. Phys. J. C **77** (2017) no.11, 761 [arXiv:1705.07959 [hep-ph]].
- [7] J. J. Renk *et al.*, JCAP **02** (2021), 022 [arXiv:2009.03286 [astro-ph.CO]].
- [8] S. Bloor, T. E. Gonzalo, P. Scott, C. Chang, A. Raklev *et al.*, [arXiv:2107.00030 [hep-ph]].
- [9] P. Athron *et al.* [GAMBIT], Eur. Phys. J. C **77** (2017) no.12, 824 [arXiv:1705.07935 [hep-ph]].
- [10] J. M. Cornell [GAMBIT], PoS **ICHEP2016** (2016), 118 [arXiv:1611.05065 [hep-ph]].
- [11] P. Athron *et al.* [GAMBIT], Eur. Phys. J. C **77** (2017) no.8, 568 [arXiv:1705.07931 [hep-ph]].
- [12] P. Athron *et al.* [GAMBIT], Eur. Phys. J. C **77** (2017) no.12, 879 [arXiv:1705.07917 [hep-ph]].
- [13] P. Athron, J. M. Cornell *et al.*, Eur. Phys. J. C **78** (2018) no.10, 830 [arXiv:1806.11281 [hep-ph]].
- [14] P. Athron *et al.* [GAMBIT], Eur. Phys. J. C **79** (2019) no.1, 38 [arXiv:1808.10465 [hep-ph]].
- [15] P. Athron *et al.* [GAMBIT], Eur. Phys. J. C **79** (2019) no.5, 395 [arXiv:1809.02097 [hep-ph]].
- [16] S. Hoof, F. Kahlhoefer, P. Scott, C. Weniger and M. White, JHEP **03** (2019), 191
[erratum: JHEP **11** (2019), 099] [arXiv:1810.07192 [hep-ph]].
- [17] M. Chrzaszcz, M. Drewes *et al.*, Eur. Phys. J. C **80** (2020) no.6, 569 [arXiv:1908.02302 [hep-ph]].
- [18] J. Bhom, M. Chrzaszcz, F. Mahmoudi, M. T. Prim, P. Scott *et al.*, [arXiv:2006.03489 [hep-ph]].
- [19] P. Athron, C. Balázs, A. Beniwal *et al.*, JHEP **05** (2021), 159 [arXiv:2007.05517 [astro-ph.CO]].
- [20] P. Stöcker *et al.*, Phys. Rev. D **103** (2021) no.12, 123508 [arXiv:2009.03287 [astro-ph.CO]].