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Probing long-lived particles with SModels v2

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The new developments in SModels, an automated tool enabling the fast interpretation of simplified model results from the LHC, make it possible to include a wide range of constraints for long-lived particles and treat them at the same footing as the constraints from prompt searches. We present these new features of SModels v2.x and the new experimental analyses included in its database, and showcase how they constrain different new physics scenarios, including electroweakinos in the MSSM, and scalar or fermionic dark matter in the scotogenic model. Finally, we also report on our SModels/pyhf interface, allowing the usage of full likelihoods as published by ATLAS.

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