Contribution ID: **369** Type: **not specified**

MARTY, an independent software program for general symbolic calculations in Beyond the Standard Model physics

Thursday 26 August 2021 14:30 (20 minutes)

We present MARTY (arXiv:2011.02478 [hep-ph]), the very first independent program automating the calculation of amplitudes, squared amplitudes and Wilson coefficients at the tree level and the one-loop level for general BSM models. This type of calculations requires a computer algebra system and could only be done, up to now, using Mathematica that is a commercial and closed software for symbolic manipulations. MARTY does not rely on Mathematica since it re-implements its own symbolic computation machinery. We show how to perform phenomenological analyses in general BSM scenarios using MARTY, for any domain of high energy physics.

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Session Classification: New Tools in New Physics Searches

Track Classification: New Tools in New Physics Searches