

# MadGraph

- Download the latest version from:  
<https://launchpad.net/mg5amcnlo>
- Extract the downloaded file:  
'tar -xzf MG5\_aMC\_v3.6.2.tar.gz'
- Move to MadGraph directory:  
'cd MG5\_aMC\_v3\_6\_2'
- Launch MadGraph:  
'./bin/mg5\_aMC'
- 'exit'

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## MadGraph5\_aMC@NLO

Overview Code Bugs Blueprints Translations Answers

Registered 2009-09-15 by Michel Herquet

MadGraph5\_aMC@NLO is a framework that aims at providing all the elements necessary for SM and BSM phenomenology, such as the computations of cross sections, the generation of hard events and their matching with event generators, and the use of a variety of tools relevant to event manipulation and analysis. Processes can be simulated to LO accuracy for any user-defined Lagrangian, at the NLO accuracy in the case of models that support this kind of calculations -- prominent among these are QCD and EW corrections to SM processes. Matrix elements at the tree- and one-loop-level can also be obtained.

MadGraph5\_aMC@NLO is the new version of both MadGraph5 and aMC@NLO that unifies the LO and NLO lines of development of automated tools within the MadGraph family. It therefore supersedes all the MadGraph5 1.5.x versions and all the beta versions of aMC@NLO. As such, the code allows one to simulate processes in virtually all configurations of interest, in particular for hadronic and e+e- colliders; starting from version 3.2.0, the latter include Initial State Radiation and beamstrahlung effects.

The standard reference for the use of the code is: J. Alwall et al, "The automated computation of tree-level and next-to-leading order differential cross sections, and their matching to parton shower simulations", arXiv:1405.0301 [hep-ph]. In addition to that, computations in mixed-coupling expansions and/or of NLO corrections in theories other than QCD (eg NLO EW) require the citation of: R. Frederix et al, "The automation of next-to-leading order electroweak calculations", arXiv:1804.10017 [hep-ph]. A more complete list of references can be found here: [http://amcatnlo.web.cern.ch/amcatnlo/list\\_refs.htm](http://amcatnlo.web.cern.ch/amcatnlo/list_refs.htm)

Download:

The latest stable release can be downloaded as a tar.gz package (see the right of this page), or through the git versioning system, using git clone <https://github.com/mg5amcnlo/mg5amcnlo.git> -b 3.x

We offer two download one LTS (Long Term Stable) which does not contains the latest features but which is regularly updated with all the bug fixing. The second LTS contains the latest version of the code containing the latest update of the code both in terms of physics and performance.

Installation:

MadGraph5\_aMC@NLO needs Python version 3.7 (or higher); gfortran/gcc 4.6 or higher is required for NLO calculations/simulations.

Getting started:

Get Involved

- Report a bug
- Ask a question
- Register a blueprint
- Help translate

Downloads

Latest version is 3.6.x

- MG5\_aMC\_v2.9.24.tar.gz
- MG5\_aMC\_v3.5.9.tar.gz
- MG5\_aMC\_v3.6.2.tar.gz**

Released on 2024-09-30

All downloads

Announcements

LTS is DEAD lona live to the new LTS on 2024-