McAtNlo_i: An interface between MC@NLO and Athena

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This package runs MC@NLO from within Athena.
See the example in **McAtNlo_i/share/jobOptions.McAtNloHerwig.py** which show how to read MC@NLO events and hadronize them using Herwig.

Users must first run MC@NLO in standalone mode and make a file of events. An athena job then takes these events hadronizes them and passes them down the Athena event chain. The events must be made with a version of MC@NLO that is compatible, recent versions that support the Les Houches interface should be acceptable. The current implementation is compatible with the version 3.1 format.

To hadronize **MC@NLO** generated events with Herwig, you only need to run athena with the jobOptions file jobOptions.McAtNloHerwig.py by typing in the prompt
athena.py jobOptions.McAtNloHerwig.py

More infomation about MC@NLO here
http://www.hep.phy.cam.ac.uk/theory/webber/MCatNLO/

Note on LHApdf stucture functions (release 11.0.0)

In the case you want to run MC@NLO with the LHAPDF structure functions you need to set the autpdf variable to HWLHAPDF and the modpdf one to the LHAPDF set/member index (see the documentation of the Generators/Lhapdf_i package for the LHAPDF set/member index settings). Up to v 3.1, MC@NLO is using the PDFLIB and not the LHAPDF one. In this case you need to edit the inparmMcAtNlo.dat and the event files and replace the PDFLIB structure functions set/member with the LHAPDF one. You can have a look at the McAtNlo_i/share/inparmMcAtNlo.dat and McAtNlo_i/share/tt.events files, as an example of what needs to be changed.

Note on the new interface for version 3.3.1

There present interface works for MC@NLO up to version 3.3.1 (at least) but *should* be backwards compatible down to version 3.1. All failues *must* be reported (if you want to get it fixed, of course).