MCRUNJOB

An overview of what is new in

v03-03-00

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MC RUNJOB

- The Latest version of mc_runjob is now available
- It is v03-03-00
  - It supports Production Releases up to p08.11.00
  - It has a pile of new features...

There is a new webpage which is nearing completion:

http://clued0.fnal.gov/mc_runjob/mainframe.html

MC RUNJOB

Home
Versions
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Welcome to the mc_runjob Web page
This page and mc_runjob maintained by Dave Evans
The mc_runjob mailing list is available, it is: d0_mc_runjob_users@fnal.gov
Current Version
v03-02-02
IMPORTANT!!!: Before proceeding read this.
New Users should click on the 'Instructions' link in the menu
What is mc_runjob?

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mc_runjob supports the following packages:

Generators:

Pythia, Isajet, Herwig, MCSingle & MCCosmic

Processors:

D0gstar, D0Sim, D0TrigSim, D0Reco, RecoAnalyze, MC_Exam

It allows the user to run any of these executables as a chain, feeding the output files from each stage into the next executable as input.
EG: pythia->d0g->sim->reco->reco_analyze

It also allows users to run part of the chain on pre-existing files. EG: old d0gstar files ->sim->reco

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- For Each executable there is a configurator which is used to specify options for running that executable.

  These Configurators are attached and set up from a text file called an mc_runjob macro.

  The webpage contains a guide to writing macros and a reference page for all of the configurators, which details every option available.

  To view these pages click on the instructions link and then the links on the instructions page for 'writing macros' and 'Configurator Guide'

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- 1. Support for p08.11.00
- 2. Herwig Configurator
- Herwig can now be run from within mc_runjob
- 3. Maxopt builds can now be used for any exe
- By putting a line into the macro like:
- cfg <exe> define int UseMaxopt 1
- 4. The CVS Cardfile package can now be used as a source of cardfiles for mc_runjob
- 5. You can use customised rcp files for any executable via the CustomRCP system.
- 6. mc_runjob now automatically produces SAM metadata for reco_analyze

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- Using The CVS cardfile package with mc_runjob
- To Use: In your macro add the line:
  - cfg <generator> define string CardfileDir <cardfile dir>
  - where <cardfile dir is the directory of the cardfile package that contains the cardfile you wish to use: np, ckm, hit etc
- The cardfile is defined by two strings specified in its name.
- The name is defined by the cardfile package naming convention: <generator>_<production>_<decay>.cards
- eg: pythia_bbbar_incl.cards, isajet_qcd_minbi.cards
- The Version of the cardfile package used will be the same version as the generator you are using (defined by the D0Release string in the macro)
- The cardfiles get converted to mc_runjob cardfiles automatically, via the CardReader.py script in mc_runjob

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- To Use your own cardfiles:
- If you do not specify the CardfileDir, mc_runjob will use the old scheme of looking in the mc_runjob/templates/cards directory.

- If You wish to use your own cards:
  - Rename it according to the Cardfile naming convention
  - Modify it for use with mc_runjob
  - Put it into the mc_runjob/templates/cards directory

The fisrt two steps can be done automatically using CardReader.py as a command line utility. It can be found in mc_runjob/py_script/CardReader.py
Do python CardReader.py help for instructions.

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- Herwig can be setup and run from a macro in mc_runjob in the same manner of the existing generators:

attach herwig

You can specify the cardfile to use via the cardfile naming convention: herwig_<production>_<decay>.cards

If this cardfile resides in the CVS cardfile package in the directory <cardfile dir> (eg np, ckm, hit, qcd ...)

In the macro this corresponds to the lines:

cfg herwig define string CardfileDir <cardfile dir>

cfg herwig define string Production <production>

cfg herwig define string Decay <decay>

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the macro for herwig are:

D0Release,
CollisionEnergy,
Light neutral higgs mass,
CustomRCPs

See the Herwig Configurator guide for a complete list and

description.
More variables can be made settable from the macro on request. (This applies to all configurators!)

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- **The Custom RCP system for mc_runjob**

- **For any exe configurator you can place a line in the macro like**
  - **cfg <d0exe> define strind CustomRCPList <rcp list>**
  - **Where <rcp list> is a text file which specifies customised rcps, the package they are for, and their location.**
- **Example:**

```
# # means comment
# Syntax is:   PACKAGE a_package RCPSCRIPT a_package.rcp
RCPLOCATION /dir1/dir
# This line replaces the RecoANtupleMgr.rcp with my own
#version of it which I
# have in a directory called /disk2/work/evansde/myRCPs
PACKAGE reco_analyze RCPSCRIPT RecoANtupleMgr.rcp
RCPLOCATION /disk2/work/evansde/myRCPs
```

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- **Full Instructions can be found on the Webpage in the Configurator guide.**

- **Warning:**
  - **Changes in the rcps cannot be logged in SAM Metadata**
  - **If you use the custom rcp system, you should not import the files you produce into SAM.**

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- Future Plans for mc_runjob:
  - Plate Geometry Switch in the macro
  - pmcs Configurator
  - SAM Read/Write integration
  - mc_request farm request system, which will work with mc_runjob from within SAM to control large MC requests
  - Rogue Configurator, to allow the user to run any executable from any version as part of the chain with mc_runjob
  - d0_select, a package to do automatic event selection for the generator from within mc_runjob.