
Subject: Re: HepMC

Posted by [Kilian Schwarz](#) on Wed, 06 Apr 2005 13:58:08 GMT

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Dear Oleg,

HepMC has been installed for gcc323 at GSI at the location
/usr/local/pub/debian3.0/gcc323-00/sim/HepMC_Version1.25
with examples at
/usr/local/pub/debian3.0/gcc323-00/sim/HepMC_Version1.25/examples

See

http://www.gsi.de/informationen/wti/dvee/software/simulations_sw.html

a description of the generated ASCII files can be found at

http://mdobbs.home.cern.ch/mdobbs/HepMC/html_reference/IO__Ascii_8cxx-source.html

it stores

ASCII-File output-extract

```
=====
HepMC::IO_Ascii-START_EVENT_LISTING
E 0 -1.0000000000000000e+00 -1.0000000000000000e+00 -1.0000000000000000e+00 0 0
164 0
0
V -1 0 0 0 0 1 2 0
P 1 2212 0 0 6.9999999371178146e+03 7.0000000000000000e+03 3 0 0 -1 0
P 3 1 1.8207711891212544e-01 1.8064803338823676e-01 1.0686638074933117e+02
1.0686668854348508e+02 3 0 0 -3 0
...
=====
```

According to my understanding, the
(rough) explanation is:

when

'E' = EVENT it stores:

- event_number,
- event_scale [energy],
- alphaQCD,
- alphaQED,
- signal_process_id,
- signal_process_vertex,
- signal_process_vertex->barcode,
- vertices_size,
- weights

when

'V' = VERTICES it stores

vertex->barcode

vertex->id

- position(x)
- position(y)
- position(z)
- time
- particles_out_size

weights
when
'P' = PARTICLE it stores
particle->barcode
 pdg_id
 momentum.px
 momentum.py
 momentum.pz
 momentum.e
 status
 polarization.theta
 polarization.phi
 end_vertex

Cheers,

Kilian