Subject: External packages Jan10 is now available
Posted by Mohammad Al-Turany on Mon, 18 Jan 2010 20:33:37 GMT

Dear all,

The new External packages (jan10) is now available (see http://fairroot.gsi.de).

In this release:

 Improve the installation script and support new system

  MAC OS X 10.6.x (Snow leoparad)
  Suse 11.2
  Ubuntu 9.10

 Check for needed system libraries and headers and report if missing
 Boost library installation has been minimized
 Add Pythia8130 to the external packages
 Add GNU Linear Programming Kit (4.39) to the external packages
 Geant4 4.9.2.p02 and Geant4 VMC (2.7b):   Support production cuts and translation between energy and
    range cuts for better comparisons between G3 and G4.
 ROOT 5.26: see http://root.cern.ch/root/v526/Version526.news.html for new features and improvements.

regards

Mohammad

Subject: Re: External packages Jan10 is now available
Posted by Johan Messchendorp on Mon, 18 Jan 2010 22:12:52 GMT

Many thanks, Mohammad.

For the developers and "up-to-date" users, please try to install the new external packages asap. We can discuss problems in the next PandaRoot meeting (if there are any!). Also note that the new external should fix the Geane bug as well...

Greetings,

Johan.

Subject: Re: External packages Jan10 is now available
Posted by StefanoSpataro on Tue, 19 Jan 2010 14:57:38 GMT
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SL 4.7 - testing macros/pid

Installation: fine
compilation: fine
running sim macro: fine
running digi macro: file
running reco macro: fine (500 muons at 1GeV with geane -> no crashes)
running pid macro: fine

Subject: Re: External packages Jan10 is now available
Posted by Lia Lavezzi on Tue, 19 Jan 2010 17:43:34 GMT
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Hallo,
  I just run the Kalman fit on two sets of 2000 muon tracks each to test GEANE and both sets
went fine with no crash

Lia.

Subject: Re: External packages Jan10 is now available
Posted by StefanoSpataro on Tue, 19 Jan 2010 19:44:04 GMT
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I have also the feeling it is much faster... but maybe I am too much optimistic now

Subject: Re: External packages Jan10 is now available
Posted by asanchez on Wed, 20 Jan 2010 12:05:29 GMT
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Dear all,
what about if some of you, GEANE experts,
run a more realistic case using for example Urqmd or Dpm(not only muons at 1GeV))to check
the stability of geane?

that would be great.

best regards

ALicia S.

Subject: Re: External packages Jan10 is now available
Posted by StefanoSpataro on Wed, 20 Jan 2010 17:10:33 GMT
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Hi,
I have simulated 500 events with psi' -> J/psi pi+ pi-.
At event 238 I have a crash in FairGeaneUtil:

Toggle Spoiler
 *** Event # 238
 ===== PndLheHitsMaker =====
  Total number of hits for tracking: 397
Total number of tracks in TPC: 7
        Good tracks in TPC: 6
 Working with 397 hits
 found   5 tracks
finder   : Real Time = 424.54 seconds Cpu Time = 205.01 seconds
 ===== PndLheTrackFitter =====
 Number of tracks for fitting 5
 *** S/R ERPROP   IERR =   2

    *** Error in subr. TRPROP   2 called bysubr. ERPROP

  *** S/R ERPROP   IERR =   2

    *** Error in subr. TRPROP   2 called bysubr. ERPROP

  *** S/R ERPROP   IERR =   2

    *** Error in subr. TRPROP   2 called bysubr. ERPROP

  *** S/R ERPROP   IERR =   2

    *** Error in subr. TRPROP   2 called bysubr. ERPROP

 *** Break *** floating point exception

```
==========================================================
```
There was a crash (#7 0x009793b0 in SigHandler ()).
This is the entire stack trace of all threads:
```
==========================================================
#0  0x0075f7a2 in _dl_sysinfo_int80 () from /lib/ld-linux.so.2
#1  0x04564f13 in __waitpid_nocancel () from /lib/tls/libc.so.6
#2  0x0450e7b9 in do_system () from /lib/tls/libc.so.6
#3  0x0072b98d in system () from /lib/tls/libpthread.so.0
#4  0x00976c87 in TUnixSystem::Exec ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#5  0x0097cb66 in TUnixSystem::StackTrace ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#6  0x00979322 in TUnixSystem::DispatchSignals ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#7  0x009793b0 in SigHandler ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#8  0x0097862d in sighandler ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#9  <signal handler called>
#10 0x00ee4e9d in TMath::Sqrt ()
   from /home/spataro/jan10/tools/root/lib/libMathCore.so.5.26
#11 0x01d819c9 in FairGeaneUtil::FromSDToSC (this=0xbff2d600, PD=0xbff2d7c0,
   RD=0xbff2d740, H=0xbff2d6f0, CH=1, SPU=1, DJ=0xbff2d6a0, DK=0xbff2d610,
   IERR=
0xbff2d5d4, PC=0xbff2d5e0, RC=0xbff2d550)
   at /home/spataro/jan10/pandaroot/trackbase/FairGeaneUtil.cxx:808
#12 0x01d7b418 in FairTrackParH::FairTrackParH ()
   at /home/spataro/jan10/pandaroot/trackbase/FairGeaneUtil.h:77
#13 0x03b9b58b in PndLheKalmanTask::Exec (this=0x97864c0, opt=0x5004918 "")
   at /home/spataro/jan10/pandaroot/lhetrack/PndLheKalmanTask.cxx:206
#14 0x00902925 in TTask::ExecuteTasks ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#15 0x00902721 in TTask::ExecuteTask ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#16 0x04fa5cbe in FairRunAna::Run (this=0x8febcc0, Ev_start=0, Ev_end=1000)
   at /home/spataro/jan10/pandaroot/base/FairRunAna.cxx:268
#17 0x04fddd4c in G__FairDict_669_0_5 (result7=0xbff3a210,
   funcname=0x937e300 "\001", libp=0xbff2fbc0, hash=0)
   at /home/spataro/jan10/cbuild/base/FairDict.cxx:9093
#18 0x0014f1d3 in Cint::G__ExceptionWrapper ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#19 0x001e7aa0 in G__execute_call ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#20 0x001e7db2 in G__call_cppfunc ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#21 0x001c98f3 in G__interpret_func ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#22 0x001b5f28 in G__getfunction ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#23 0x0029f339 in G__getstructmem ()
```

from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#24 0x00296f76 in G__getvariable ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#25 0x00198ee6 in G__getitem ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#26 0x0019d089 in G__getexpr ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#27 0x0021b3ed in G__exec_statement ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#28 0x00186854 in G__exec_tempfile_core ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#29 0x00187bd3 in G__exec_tempfile ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#30 0x00229c92 in G__process_cmd ()
   from /home/spataro/jan10/tools/root/lib/libCint.so.5.26
#31 0x00964b57 in TCint::ProcessLine ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#32 0x00964cd8 in TCint::ProcessLineSynch ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#33 0x008993b0 in TApplication::ExecuteFile ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#34 0x00899673 in TApplication::ProcessFile ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#35 0x0089798f in TApplication::ProcessLine ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#36 0x006d1481 in TRint::Run ()
   from /home/spataro/jan10/tools/root/lib/libRint.so.5.26
#37 0x08048d5a in main ()
===

The lines below might hint at the cause of the crash.
If they do not help you then please submit a bug report at
http://root.cern.ch/bugs. Please post the ENTIRE stack trace
from above as an attachment in addition to anything else
that might help us fixing this issue.
===
#10 0x00ee4e9d in TMath::Sqrt ()
   from /home/spataro/jan10/tools/root/lib/libMathCore.so.5.26
#11 0x01d819c9 in FairGeaneUtil::FromSDToSC (this=0xbff2d600, PD=0xbff2d7c0,
   RD=0xbff2d740, H=0xbff2d6f0, CH=1, SPU=1, DJ=0xbff2d6a0, DK=0xbff2d610,
   IERR=
0xbff2d5d4, PC=0xbff2d5e0, RC=0xbff2d550)
   at /home/spataro/jan10/pandaroot/trackbase/FairGeaneUtil.cxx:808
#12 0x01d7b418 in FairTrackParH::FairTrackParH ()
   at /home/spataro/jan10/pandaroot/trackbase/FairGeaneUtil.h:77
#13 0x03b9b58b in PndLheKalmanTask::Exec (this=0x97864c0, opt=0x5004918 "")
   at /home/spataro/jan10/pandaroot/lhetrack/PndLheKalmanTask.cxx:206
#14 0x00902925 in TTask::ExecuteTasks ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26
#15 0x00902721 in TTask::ExecuteTask ()
   from /home/spataro/jan10/tools/root/lib/libCore.so.5.26

#16 0x04fa5cbe in FairRunAna::Run (this=0x8febcc0, Ev_start=0, Ev_end=1000)
   at /home/spataro/jan10/pandaroot/base/FairRunAna.cxx:268
   ===

Root > .q
[spataro@hal pid]$

But I think the problem comes from LheKalmanTask, and not from Geane. Tomorrow I will try
to investigate about.

Subject: missing ROOT libraries
Posted by Olaf Hartmann on Thu, 21 Jan 2010 15:56:27 GMT
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Hi all,

with the new external packages I can not compile the EvtGen package:

[olaf@pc43 EvtGen]$ make bin
gcc -L. -L/usr/lib64/cernlib/2006/lib/ -L/home/olaf/fairsoft/cern/clhep/lib
-L/home/olaf/fairsoft/tools/root/lib -lRIO -lSQL -lNet -o testEvtGen testEvtGen.o -lEvtGen
-lEvtGenModels -lEvtGenBase -lCLHEP -l -lpdflib804 -lpacklib -lmathlib -lphotos202 -lCore
-lCint -lHist -lGraf -lGraf3d -lGpad -lTree -lRint -lPostscript -lMatrix -lPhysics -ldl -lg2c -lnsl -lm
-lMathCore -lThread
/usr/bin/ld: cannot find -lSQL
collect2: ld returned 1 exit status

libSQL.so is present in the july09 root version, but not in the current one ...

Cheers
Olaf.

Subject: Re: missing ROOT libraries
Posted by Mohammad Al-Turany on Thu, 21 Jan 2010 16:24:41 GMT
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Hi Olaf,

First of all EvtGen is not part of PandaRoot or fair external packages, So may be it would be
even better to remove it from pandaroot svn and put it somewhere else.

I never understood why it need SQL? in fact it does not but the the library is linked there in the
config.mk, so please remove it from there! if you are using g77 then that is it, otherwise you
have to remove also the libg2c and replace it with libgfortran.

cheers,

Mohammad

Subject: Re: missing ROOT libraries
Posted by StefanoSpataro on Thu, 21 Jan 2010 16:54:27 GMT
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libSQL was required by ROOT since v5.16.
If it is not needed anymore, we could remove it from the configuration script.

Subject: Re: missing ROOT libraries
Posted by Johan Messchendorp on Thu, 21 Jan 2010 19:15:03 GMT
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Hi,

Be-aware that we decided to keep as much as possible the compatibility with the old external packages for the time being. Maybe it would be good if we update the installation wiki page concerning EvtGen where we can indicate the changes etc. Of course the best would be if we could improve the building system for EvtGen in the course of time.... I will start defining a workpackage on this, since the installation of EvtGen keeps on bugging us.

Done: http://panda-wiki.gsi.de/cgi-bin/view/Computing/WorkPackageEvtGenForPand a

Olaf, could I interest you for this workpackage?

Johan.

Subject: Re: External packages Jan10 is now available
Posted by StefanoSpataro on Thu, 21 Jan 2010 19:52:30 GMT
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Found the problem, and by-passed.
Please update lhetrack package.
Now I was able to run 1000 psi' events up to PID without a single crash.

Subject: Re: missing ROOT libraries
Posted by Olaf Hartmann on Fri, 22 Jan 2010 13:03:16 GMT
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Mohammad Al-Turany wrote on Thu, 21 January 2010 17:24
I never understood why it need SQL? in fact it does not but the the library is linked there in the config.mk, so please remove it from there! if you are using g77 then that is it, otherwise you have to remove also the libg2c and replace it with libgfortran.

I changed locally the default link options in the configure script omitting lSQL, and EvtGen can be linked. I did not test whether it still works with the ROOT version in the july09 external packages.

Bye,
Olaf.

Subject: Re: External packages Jan10 is now available
Posted by Lia Lavezzi on Fri, 22 Jan 2010 15:05:11 GMT
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Hi Alicia,
 following your suggestion, I tested GEANE running the Kalman fit (macro/stt/rungenfit.C) on 1000 evts from Urqmd (pbar at 1.5 GeV/c annihilating on He4) and it ended without crashing: I tested it once taking the pdg code from the MC truth and another time following the more realistic idea that we don' t know which particle we are propagating and we have to run the fit on the 5 particle hypothesis (actually I didn' t do it for all 5 particles, but I chose just one of them, the pion, setting pdg by hand to +/-211, depending on the charge). Both tests ended normally.

Ciao,
Lia.

Subject: Re: External packages Jan10 is now available
Posted by asanchez on Fri, 22 Jan 2010 17:07:05 GMT
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Dear Lia
thanks a lot
for your efforts.

I have a question, maybe it is too naive
but is geane runnig well using geant4, or one
should use geant3 exclusively to be able to
get geane stable??

thanks again
Alicia.

Subject: Re: External packages Jan10 is now available
Posted by StefanoSpataro on Fri, 22 Jan 2010 17:56:31 GMT
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Geane is independent on what you use in simulation. Therefore, you could use g3 as well as g4, nothing will change in geane results.

Subject: Re: External packages Jan10 is now available
Posted by Lia Lavezzi on Mon, 25 Jan 2010 09:56:00 GMT
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Exactly,
  you can simulate either with geant3 or with geant4 and then use geane without problems, though geane propagates the particles with geant3-based routines. It just reads the geometry and the magnetic field, but it does not depend on what you used to simulate events.

However, a track follower geane-like, but geant4-based, called geant4e has been released and we are managing to test it with pandaroot (to compare it to geane).

Obviously, if you find any problem in running geane after geant4 please tell us!
        Ciao,
         Lia.