
Subject: macro updates and an all-in-one macro for pandaroot
Posted by [Johan Messchendorp](#) on Sat, 28 Nov 2009 18:57:51 GMT
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Dear developers,

As we discussed in our last EVO meeting, the aim is to get to a production release of PandaRoot very soon. For this, we would like to update all the available macros in "/macro/xxxx" with a running configuration. Furthermore, we will create a "all-in-one" macro in "/macro/run" with a complete setup, digitization, reconstruction, etc, chain of the complete Panda system. The default transport model which will be used is Geant3 as requested by the TPC developers and agreed upon. In order to get to an all-in-one macro, it is very important that every detector/subsystem developer updates his/her macro in the trunk release (macro/<your-subsystem>/) and remove obsolete macros as well. Many of the macros already have been updated by Mohammad and Stefano in past week, but there are still problems remaining. Once this is done, Mohammad volunteered to setup the all-in-one macro in "macro/run". So please, update your macros asap, before Wednesday upcoming week! Also, inform us which macros to use as input for the "all-in-one" macro....

Kind wishes and thanks in advance,

Johan.

Subject: Re: macro updates and an all-in-one macro for pandaroot
Posted by [Lia Lavezzi](#) on Tue, 01 Dec 2009 10:32:50 GMT
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Hallo,
the STT macros are updated in macro/stt.

The chain of simulation -> digitization -> reconstruction is done via:

- 1) run.C (only STT geometry is present)
- 2) rundigi.C (task for digitization of STT)
- 3) runreco.C (tasks for local reconstruction of STT)
- [4) rungenfit.C (kalman filter of STT alone)]

the tasks contained in the first 3 macros are necessary either if you want to reconstruct with the STT alone or if you want to reconstruct with all the detectors (since a local reco is necessary for STT).

The tasks in macro 4 are necessary only if you want to perform the Kalman filter with the STT alone (not necessary as input for the global tracking, so not necessary if we want to reconstruct with the whole detector).

Best regards,
Lia.

Subject: Re: macro updates and an all-in-one macro for pandaroot

Posted by [mpeliz](#) on Tue, 01 Dec 2009 13:28:02 GMT

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Hello,

for the EMC the three macros

sim_emc.C
digi_emc.C
reco_emc.C

are working properly for the three step approach.
The approach without intermediate output is done by

emc_complete.C

These macros can be found in the head of the trunk and should go to the next stable release.

Best regards,

Marc

Subject: Re: macro updates and an all-in-one macro for pandaroot

Posted by [Felix Boehmer](#) on Tue, 01 Dec 2009 15:16:40 GMT

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Hello,

I updated the three TPC run-macros in the macro/tpc folder:

runMC.C
runDigi.C
runReco.C

I removed the dependency on any GEANT/VMC setting files and moved the information into the PndTpcDetector class (as in the latest svn version) as suggested by Mohammad. Also I removed any dependencies on external files. The settings found in these macros are to be considered default settings. The macros have been tested quickly by me and show reasonable results.

At this point I also want to apologize that at the moment I am unfortunately absolutely not able to help on this matter any more than this, since the submission date of my diploma thesis is approaching relentlessly. In particular I am not able to take care of that task wrapper class or the qa macros Johan requested. I am fully available again in 2 weeks.

Sorry and Cheers

Felix

Subject: Re: macro updates and an all-in-one macro for pandaroot
Posted by [Mohammad Al-Turany](#) on Wed, 02 Dec 2009 08:59:56 GMT
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Hi,

in the run directory there is now:

```
sim_complete_stt.C  
digi_complete_stt.C  
reco_complete_stt.C
```

and

```
sim_complete_tpc.C
```

for the simulation:

to run with different options:(e.g more events, different momentum, Geant4)
`root sim_complete_XXX.C"(100, "TGeant4",2)"`

the reco and digi for the TPC option will follow soon.

regards

MOhammad

Subject: Re: macro updates and an all-in-one macro for pandaroot
Posted by [Mohammad Al-Turany](#) on Wed, 02 Dec 2009 16:00:13 GMT
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Hi,

As discussed today, and after getting the evtgen file from Klaus I updated the macros so that user can switch on/off three event generators, EvtGen, Dpm and the box generator. The momentum is by default 7.45 GeV/C and can be changed for Dpm and Box from the argument of the macro. The evtGen file is in the input directory, it is less than 1 MB so I put it as it is (ASCII). In the macro there is three boolean for the different generators as below:

```
Bool_t UseEvtGen      =kTRUE;  
Bool_t UseDpm         =kFALSE;  
Bool_t UseBoxGenerator =kFALSE;
```

you can switch them all on if you like or any combination, by default the EvtGen is used with the file from Klaus (psi2s_jpsi2pi_1k.evt).

Radek also send me the GEM stuff, so it is now integrated in all SIM, DIGI and RECO.

I also added a macro, `sim_complete_stt_vis.C` which is the same as the `sim_complete_stt.C` but with the track visualization stuff.

regards

Mohammad

Subject: Re: macro updates and an all-in-one macro for pandaroot
Posted by [Johan Messchendorp](#) on Wed, 02 Dec 2009 18:40:56 GMT
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Thanks everyone for taking care!

Johan.

Subject: Re: macro updates and an all-in-one macro for pandaroot
Posted by [Mohammad Al-Turany](#) on Wed, 02 Dec 2009 21:54:20 GMT
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Hallo everybody,

Now the reconstruction list is complete,

sim_complete_stt.C
digi_complete_stt.C
reco_complete_stt.C

and

sim_complete_tpc.C
digi_complete_tpc.C
reco_complete_tpc.C

with almost all detectors, it would be great if you each detector group can run them and control there part if everything is OK.

regards

Mohammad

Subject: Re: macro updates and an all-in-one macro for pandaroot
Posted by [Lia Lavezzi](#) on Thu, 03 Dec 2009 10:21:27 GMT
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Hi Mohammad,

I've seen that the geometry file of STT is not the right one. It should be:
straws_skewed_blocks_pipe_120cm.geo to use the 120 cm long STT.

Can I change it by myself in the macros since macro/run is open to everyone? If not, can you please do it?

Thank you very much,
Lia.

Subject: Re: macro updates and an all-in-one macro for pandaroot
Posted by [Mohammad Al-Turany](#) on Thu, 03 Dec 2009 10:30:49 GMT
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Hi Lia,

yes, please change it. As you said the run is now open for everybody.

Thanks

Mohammad

Subject: Re: macro updates and an all-in-one macro for pandaroot
Posted by [Lia Lavezzi](#) on Thu, 03 Dec 2009 10:55:05 GMT
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Ok, thanks, done
Lia.

Subject: Re: macro updates and an all-in-one macro for pandaroot
Posted by [Klaus Götzen](#) on Thu, 03 Dec 2009 12:14:13 GMT
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Hi,

I took care about the Fast Sim macros. For simulation I updated Mohammads macro, and I added an analysis macro.

- run_fast.C
(runs per default 1000 evts of psi(2s)->J/psi pi pi)
- ana_fast_psi2s.C
(analysis of the resulting 'simfast.root')

The latter in principle also works with another input, e.g. from full sim by calling

```
.x ana_fast_psi2s.C("input.root");
```

where input contains the PndPidCandidate and PndPidProbabiliy TCAs.

Cheers,

Klaus

Subject: Re: macro updates and an all-in-one macro for pandaroot
Posted by [Johan Messchendorp](#) on Sat, 05 Dec 2009 17:41:56 GMT
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Dear all,

I placed the new run macros (also the fast simulation) as part of the nightly QA tests. So, keep an eye on the results via the dashboard:

<http://fairroot.gsi.de/CDash/index.php?project=PandaRoot>

Greetings,

Johan.
