Subject: Geant4 tutorial/mini workshop
Posted by Johan Messchendorp on Fri, 02 Nov 2007 10:09:48 GMT
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Dear all,

I just got an email from Rainer Novotny who is presently at the IEEE meeting in Hawai (some people have it good!). He talked to Maria Grazia Pia from the Geant4 group. It seems that the Geant4 team is regularly giving workshop about Geant4 at several places in Europe. The Geant4 team is also willing to provide a tutorial/mini-workshop in connection to our collaboration meetings, for instance in March next year.

I personally think that this is not a bad idea. It provides an opportunity to discuss with their experts about our "problems". Probably, we would also need to have VMC experts around during such discussions.

If we would be interested to organize such event, it would be wise to collect a list of questions, problems, suggestions, etc, which we can send to Maria to setup a program for such an event.

Opinions, suggestions, etc, are welcome!

Johan.

Subject: Re: Geant4 tutorial/mini workshop
Posted by Mohammad Al-Turany on Mon, 05 Nov 2007 09:44:36 GMT
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Hallo,

I am not really sure how such an event will help us at this
early stage in PANDA? The problem is that we are using the VMC
with Geant4 and not the native Geant4, So these people will
speak about the native Geant4 and make some tutorials which
will not really help us. They will tell us about the nice
different models which they have but they will never be able to
tell us if these models are really useful for us, this we have
to validate ourselves (with and without VMC, see for example:
http://indico.cern.ch/conferenceDisplay.py?confId=21884 ,or
the attached ppt) The fact that we use VMC which introduce a
different navigation to Geant4 makes such workshops (my
personal opinion) somehow useless for us.

File Attachments
1) p90CHIPS.ppt, downloaded 680 times

Subject: Re: Geant4 tutorial/mini workshop
Posted by Pablo Genova on Mon, 05 Nov 2007 14:18:08 GMT
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Hi Mohammad,

just a simple question: so, in general, for each new model introduced into native Geant4, one has to validate if it is properly working within the Virtual Monte Carlo, right?

So you would suggest to validate inside the VMC only the models that we really need for our physics, right?
In this logic, rather than the Geant4 tutorials, what we need is to keep updated on the new physics models, and see how they match the real needs for Panda physics.

ciao, Pablo

Subject: Re: Geant4 tutorial/mini workshop
Posted by Mohammad Al-Turany on Mon, 05 Nov 2007 14:55:44 GMT
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Hi Pablo,

so, in general, for each new model introduced into native Geant4, one has to validate if it is properly working within the Virtual Monte Carlo, right?

You have to validate if it is working properly at all for your perpose! This is independent of the VMC.

So you would suggest to validate inside the VMC only the models that we really need for our physics, right?

The main problem is to identify these models (physics list), now if we do this and found for example some strange behavior compared to data, it will be hard to convince the G4 developer team that this is not coming from the VMC! unless you reproduce this with native Geant4!

In this logic, rather than the Geant4 tutorials, what we need is to keep updated on the new physics models, and see how they match the real needs for Panda physics.

we need to identify some channels to validate both VMC-Geant4 and if needed also native Geant4 for our use. Because this job has not been done at CERN, ALICE do not really use Geant4 and they only validate G3 and G3-VMC and plane to do this with FLUKA but not Geant4!

regards

Mohammad

Subject: Re: Geant4 tutorial/mini workshop
Posted by Jens Sören Lange on Wed, 14 Nov 2007 16:44:47 GMT
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Dear all, as just mentioned on the EVO meeting,
I think there are two reasons actually in favour
of a g4 mini-workshop (but not in form of tutorials).

1.) discussion about g4 validation

so far, we only know Thierry Mertens' and Chris Strackbein's
comparison of emc data to simulation, but we never really
dicussed g4 validation for any other detector.
For example, how do we validate the Cerenkov detectors?

2.) comparison to the physics book

As Stefano explained, the babar-like fast sim uses g4.7.1,
so the physics book results will be different from any
PandaRoot results. There is no way to avoid. The question
would be: how much different?

Both are important topics to discuss, so maybe it is worth
to dedicate one afternoon at the KVI workshop?

Soeren

Subject: Re: Geant4 tutorial/mini workshop
Posted by Johan Messchendorp on Thu, 15 Nov 2007 09:16:33 GMT
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Dear all,

In principle I could try to get one of the G4 experts for the Groningen workshop. The question is whether we need such an expert to address the items which Soeren is mentioning in his message. As far as I can oversee, these items are all "internal" questions.

I propose the following: lets indeed dedicate an afternoon to G3-G4 during the workshop, and based upon the outcome of this, we might consider to invite a G4 expert for the next collaboration meeting. Is that ok with everyone?

Kind wishes,

Johan.