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Subject: Geant energy loss zero

Posted by [Stefan Pflueger](#) on Mon, 18 Sep 2017 15:36:59 GMT

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Hi,

I'm currently trying to get our LMD simulation macro to work with the new Pandaroot/Fairroot code and I found a few issues. I added a line in the Register function of PndSdsDetector because no MCHits were generated by GEANT4... This seems to solve the issue. However the energy loss is 0, hence the hits are not written to file or when force written the digitization fails. Afaik the MVD code also uses the SDS classes. Do the new simulations work for you? My second question would be, why is the energy loss zero? Maybe some weird cut or some bad Geant4 setting?

Stefan

```
void PndSdsDetector::Register()
{
    fPndSdsCollection = FairRootManager::Instance()->GetTClonesArray(fOutBranchName);
    if (! fPndSdsCollection){
        std::cout << "-W- PndSdsDetector: New branch " << fOutBranchName << " created!" <<
        std::endl;
        FairRootManager::Instance()->Register(fOutBranchName, "PndSdsMCPoint", fFolderName,
        kTRUE);
        [b]fPndSdsCollection =
        FairRootManager::Instance()->GetTClonesArray(fOutBranchName);[/b]
    }
    //FairRootManager::Instance()->Register(fOutBranchName, fFolderName, fPndSdsCollection,
    fPersistance);
}
```

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Subject: Re: Geant energy loss zero

Posted by [Ralf Kliemt](#) on Fri, 22 Sep 2017 08:06:59 GMT

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Ahoi Stefan!

What "new" versions of FairSoft, FairRoot and PandaRoot do you currently use? Please also point me to the macros you use.

Cheers!  
Ralf

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Subject: Re: Geant energy loss zero

Posted by [Stefan Pflueger](#) on Mon, 25 Sep 2017 14:42:26 GMT

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Hi Ralf!

I'm using the FairSoft mar16p1 with root6, FairSoft 17.03, and the Pandaroot trunk. There I try to run the macro "macro/lmd/runLumiPixel0SimDPM.C". That macro is a bit special and needs an raw event data input file to run. So if you want to let the macro run and see the output, maybe just try running the runLumiPixel0SimBox.C macro. That one runs without the event input file. I have not executed that SimBox script, but it should also not work and just have an empty output root file (due to the zero energy loss).

Cheers,  
Stefan

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Subject: Re: Geant energy loss zero

Posted by [Ralf Kliemt](#) on Thu, 28 Sep 2017 14:09:05 GMT

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Hi Stefan,

I tried now with the version you state and have no issues getting some charge information on the LMD Points and hits. Even without your change to SdsDetector.

I was running in macro/lmd:

```
root -l -b -q runLumiPixel0SimBox.C
```

```
root -l -b -q runLumiPixel1Digi.C
```

```
root -l -b -q runLumiPixel2Reco.C
```

Ralf

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Subject: Re: Geant energy loss zero

Posted by [Stefan Pflueger](#) on Thu, 28 Sep 2017 14:18:01 GMT

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Hi Ralf,

ok strange... I will also run that SimBox macro on my machine and compare the SimBox macro with the DPM one to see what is different. Thx for your help

Cheers,  
Stefan

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Subject: Re: Geant energy loss zero

Posted by [Stefan Pflueger](#) on Thu, 02 Nov 2017 10:39:26 GMT

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Hi Ralf,

ok I finally had time to run the SimBox macro and investigate. I cant even run the SimBox macro, because one geometry\_filename argument was missing. After fixing that I get the same problems that the energy loss is zero... Obviously we are not running the same system. Are you sure you have the up to date version of the pandaroot trunk?

Cheers,  
Stefan

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Subject: Re: Geant energy loss zero  
Posted by [Ralf Kliemt](#) on Thu, 02 Nov 2017 11:20:13 GMT  
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Hi Stefan,

How about you try to run on the GSI machines at lx-pool.gsi.de?

Cheers!  
Ralf

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Subject: Re: Geant energy loss zero  
Posted by [Stefan Pflueger](#) on Thu, 02 Nov 2017 13:34:22 GMT  
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Hi Ralf,

just tried that with the same result...

Stefan

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