Subject: Magnetic Fields in Pandaroot
Posted by EDownie on Mon, 04 Jun 2007 14:21:16 GMT
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Hi,

I am new to Pandaroot & VMC and would like to use the field maps based on the final magnet designs in the simulation. I have several questions:-

1) Is the code already able to accept field maps, or does it simply do uniform fields?

2) If Pandaroot is already capable of loading field maps, which format should the map be in for Pandaroot use, and do conversion utilities exist?

3) What is the current status / capability of libField.so?

Thank you very much for your help!

Evie Downie

Subject: Re: Magnetic Fields in Pandaroot
Posted by StefanoSpataro on Mon, 04 Jun 2007 14:33:21 GMT
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Hello,
we have already a realistic magnetic field map, updated to the January 07 design (so not yet the space inside the yoke for the muon detector).
In order to use it just see what is present in the macro/emc/sim_emc.C file. You have to use:

```
PndMultiField *fField= new PndMultiField();
PndTransMap *map= new PndTransMap("TransMap", "R");
PndDipoleMap *map1= new PndDipoleMap("DipoleMap", "R");
PndSolenoidMap *map2= new PndSolenoidMap("SolenoidMap", "R");
fField->AddField(map);
fField->AddField(map1);
fField->AddField(map2);
fRun->SetField(fField);
```

And that is all. This comes from the offial drawings (before the last update). So you don't have to put some private field map.
Bye

Stefano

Subject: Re: Magnetic Fields in Pandaroot
Posted by EDownie on Mon, 04 Jun 2007 15:20:56 GMT
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Hi Stefano,

We would like to be able to load in more recent maps that include things like the muon chambers (which are not yet created - but hopefully soon will be) and slightly altered field maps to look at the affect of magnet misalignments etc. on particle tracking, as part of the magnet studies.

Is there already a utility to convert TOSCA / text file output to the required format?

Thanks very much!

Evie Downie

Subject: Re: Magnetic Fields in Pandaroot
Posted by StefanoSpataro on Mon, 04 Jun 2007 15:28:55 GMT
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Hi,
Mohammed did from the TOSCA files and CATIA drawings. I think he has some sort of converter.

In each case magnet definition and magnetic field should go in parallel. If we have both the updates, that could be good.

Subject: Re: Magnetic Fields in Pandaroot
Posted by EDownie on Mon, 04 Jun 2007 15:47:02 GMT
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Hi Stefano,

As soon as we have any updated magnetic fields, I'll pass them on.

Thanks very much!

Evie