
Subject: Constant magnetic field instead Solenoid Field maps
Posted by [Anastasia Karavdina](#) on Mon, 01 Jul 2013 19:36:46 GMT
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Dear all,

As the luminosity detector group learnt during the last coll.meeting, solenoid magnetic field can't be 2T in all beam momentum range and for energies below ~3 GeV it should be 1T.

As far as I know, there is unique set of maps for solenoid field which is used for all energies. Is it possible to generate field maps for 1.5 GeV with 1T solenoid field? Whom we should ask to do it?

In meanwhile, since for LMD we have many troubles @1.5GeV, I'm trying to do tests with constant field instead loading maps for Solenoid Field. The idea is use $B_z=1T$ for this constant field. But for cross-check with results obtained with standard solenoid maps I'm using 2T in 1st test.

The part of macro code looks like this:

```
PndMultiField *fField= new PndMultiField();
PndTransMap *map_t = new PndTransMap("TransMap", "R");
PndDipoleMap *map_d1 = new PndDipoleMap("DipoleMap1", "R");
PndDipoleMap *map_d2 = new PndDipoleMap("DipoleMap2", "R");
fField->AddField(map_t);
fField->AddField(map_d1);
fField->AddField(map_d2);

PndConstField *fSolField=new PndConstField();
fSolField->SetField(0,0,20); // values are in kG //for cross-check with results from maps set
Bz=2T
fSolField->SetFieldRegion(-240,240,-240,240,-172,283.7);//z range is sum from
Solenoid#1-#4 maps
fField->AddField(fSolField);

fRun->SetField(fField);
```

The simulation with such fields set is running, but I see many messages:

GetBz Should be implemented

Does it mean that I didn't something wrong with constant mag. field?

Best regards,
Anastasia.
