
Subject: Re: Fieldmaps for the half current solenoid
Posted by [donghee](#) on Fri, 14 Mar 2014 23:19:26 GMT
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Hi Prome and Stefano,

The final issue for 1/2 half field map still remain due to combining two stuff between field map and accessor in my point of view.

I assume that total size of cubic(or vector) and structure must be same for half field map. Then additional field map will be placed into the pandaroot/input/ according to transition region with 2 different beam momentum and one common solenoid

```
TransMap_Low.0150.root  
TransMap_Low.0300.root  
SolenoidMap_Low1.root  
SolenoidMap_Low2.root  
SolenoidMap_Low3.root  
SolenoidMap_Low4.root
```

One can access reduced map via /field/PndMultiField by "Half" in user side. I expect simply additional option "Half" with above naming scheme

Quote:

```
else if (Map=="Half") {  
PndTransMap *map_t= new PndTransMap("TransMap_Low", "R", fBeamMom);  
PndDipoleMap *map_d1= new PndDipoleMap("DipoleMap1", "R", fBeamMom);  
PndDipoleMap *map_d2= new PndDipoleMap("DipoleMap2", "R", fBeamMom);  
PndSolenoidMap *map_s1= new PndSolenoidMap("SolenoidMap_Low1", "R");  
PndSolenoidMap *map_s2= new PndSolenoidMap("SolenoidMap_Low2", "R");  
PndSolenoidMap *map_s3= new PndSolenoidMap("SolenoidMap_Low3", "R");  
PndSolenoidMap *map_s4= new PndSolenoidMap("SolenoidMap_Low4", "R");  
AddField(map_t);  
AddField(map_d1);  
AddField(map_d2);  
AddField(map_s1);  
AddField(map_s2);  
AddField(map_s3);  
AddField(map_s4);  
}  
....
```

Basically between 1.5 GeV and 3.0 GeV only one transition map should be enough. However we have already two field map for transition region by producing from Prome. Then field/PndTransMap.cxx have to be replaced by a piece of handling for this two transition map.

Quote:

```
fType = 4;  
TString Suffix="";
```

```

FairRunSim *fRun= FairRunSim::Instance();
if(fRun) fBeamMom= fRun->GetBeamMom();

//if(fBeamMom< 3.0)Suffix=".0150" ;//inactivate
if(fBeamMom>= 1.5 && fBeamMom <= 2.25)Suffix=".0150" ; //baem momentum close to the
1.5 GeV
if(fBeamMom>= 2.25 && fBeamMom <= 3.0)Suffix=".0300" ; //beam momentum clsoe to the
3.0 GeV
//actually between 1.5 and 3.0 GeV only one transition map.

else if (fBeamMom< 6.0 && fBeamMom >= 3.0)Suffix=".0406";
else if (fBeamMom< 10.0 && fBeamMom >= 6.0 )Suffix=".0890" ;
else if (fBeamMom< 13.0 && fBeamMom >= 10.0)Suffix=".1191";
else if (fBeamMom> 13.0) Suffix=".1500";

TString NewName=mapName;
NewName=mapName+Suffix;
SetName(NewName.Data());
TString dir = getenv("VMCWORKDIR");
fFileName = dir + "/input/" + NewName;
if ( fileType[0] == 'R' ) fFileName += ".root";
else fFileName += ".dat";

```

I think then we have no problem at all for this issue.
Do I miss somewhere else?

Best wishes,
Donghee