Subject: New Muon Geometry
Posted by StefanoSpataro on Fri, 24 Jul 2009 09:09:07 GMT
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Hello,
I have committed in svn the last version of the muon detector geometry (done by George), including also the muon filter.
Inside the code there are also the classes to create the return yoke and the absorber, considering that the actual version of the solenoid is not working.

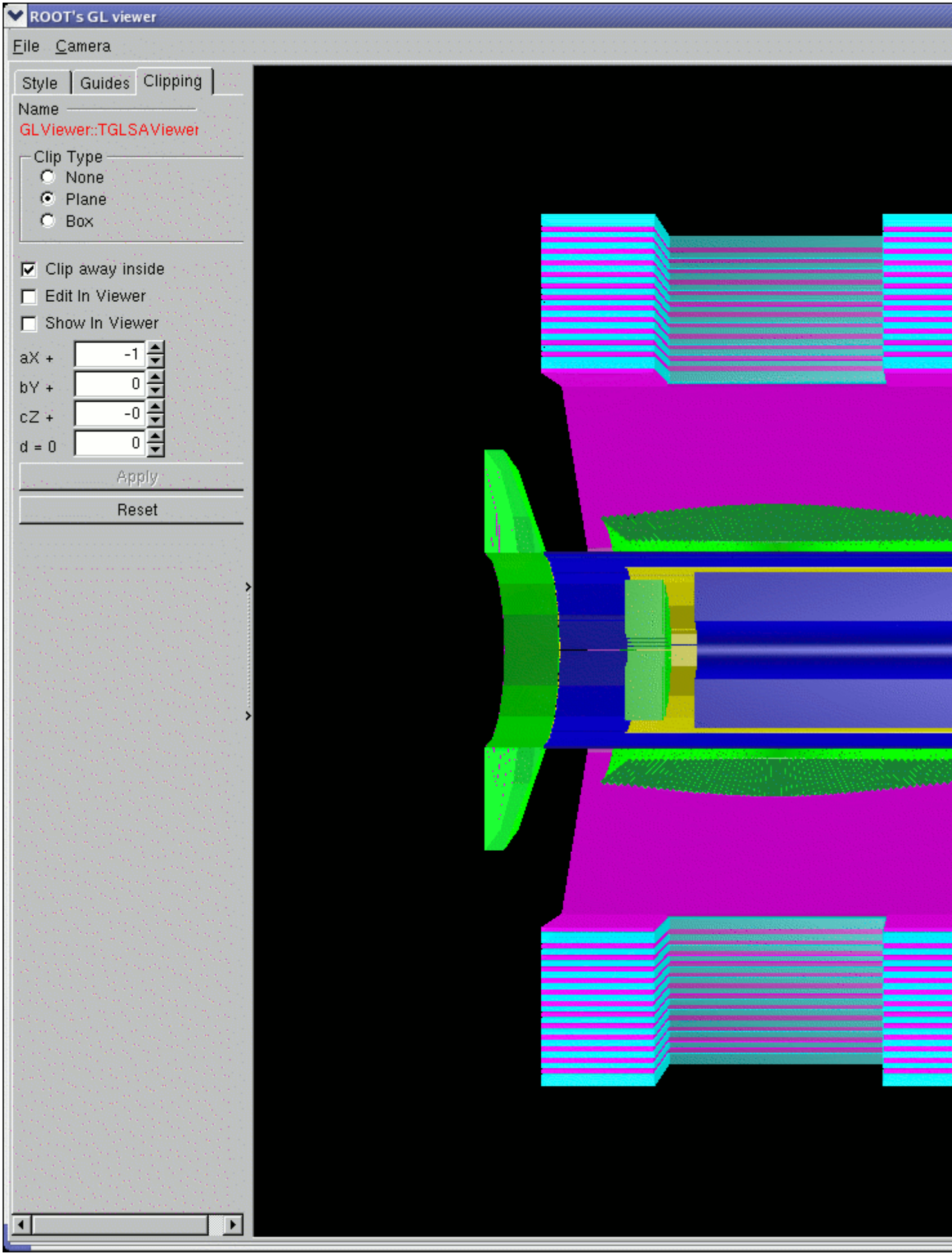
The following is the plot of the geometry:

You can see the hole for the target pipe, and the additional muon filter. DCH geometry should be tested, to see if it fits inside the muon fitler (the size is taken from integration design ver. 0.1.15 (2009-06-05)).
In macro/mdt you can find the sim_muo.C macro to use that geometry (waiting that the solenoid is ready).

Regards

File Attachments

1) newmuo.gif, downloaded 1531 times


ROOT's GL viewer
File
Camera
Style
Guides
Clipping
Name
GLViewer::TGLSAViewer
Clip Type
None
Plane
Box
Clip away inside
Edit In Viewer
Show In Viewer
aX +
-1
bY +
0
cZ +
-0
d = 0
0
Apply
Reset

Subject: Re: New Muon Geometry
Posted by Valery Rodionov on Fri, 09 Oct 2009 06:12:56 GMT
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Hi

Nice view of muon detector geometry, but

the real muon system geometry is different and more complicated.

Valery

Subject: Re: New Muon Geometry
Posted by Johan Messchendorp on Fri, 09 Oct 2009 07:46:32 GMT
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Dear Valery,

....then the question will be "How the real muon geometry should look like"?!?

Greetings,

Johan.

Subject: Re: New Muon Geometry
Posted by StefanoSpataro on Fri, 09 Oct 2009 07:52:25 GMT
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The "Torino" design implemented in PandaRoot consists on sensible planes placed at the official positions, for tracking studies (which I am doing) and physics analysis about background rejection.
The "Dubna" design is the same (in general terms) but has a high level of details (box/tube/wire). At the moment there are no "ProcessHits" or other functions for simulation inside PandaRoot and digitization, only geometry root file.

Subject: Re: New Muon Geometry
Posted by Valery Rodionov on Fri, 09 Oct 2009 08:10:05 GMT
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Hi Johan

at the end of July 2009 A.Efremov put an revised magnet version on
PANDA Wiki -> Magnet -> Internal. Our model are in according to this final (I hope) magnet version. In pandaroot we have an oldest magnet version (PandaSolenoidV833.root). So we are waiting for the new magnet revision.

The muon system files are:
muon_FS.root -> Forward System (MDT + Fe)
muon_TS_barrel.root -> Yoke: barrel part
muon_TS_endcap.root -> Yoke: endcap part

Up to now theri is no geometry file for Muon Filter. We are waiting for drawing from DC side hole in plate).

Subject: Re: New Muon Geometry
Posted by StefanoSpataro on Fri, 09 Oct 2009 08:13:07 GMT
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Valery Rodionov wrote on Fri, 09 October 2009 10:10pandaroot we have an oldest magnet version (PandaSolenoidV833.root). So we are waiting for the new magnet revision.

For this reason, in the Torino design, the magnet version we are using is constructed inside the MDT classes, so that one can have the correct amount of iron without using the old-fashioned solenoid.
Still the coils are missing within this design, I hope Tobias can convert just them, in order to have almost everything running.
