Subject: Question about pipe simulation
Posted by donghee on Wed, 29 Jul 2009 09:13:27 GMT
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Dear colleague,

What is difference between pipe.geo and pipebeamtarget.geo?
If I use pipe.geo, is the material related target system empty in the simulation?

How can I read it? Could you translate pipe.geo with human language, or is there some instruction manual?

Best regards,
Donghee

Subject: Re: Question about pipe simulation
Posted by Ralf Kliemt on Wed, 29 Jul 2009 09:33:52 GMT
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Hello Donghee,

As far as I see it, you don't need to load a geometry file to implement the beampipe. It is directly created by the PndPipe class.
However, I don't know these .geo files.

Kind regards, Ralf.

Subject: Re: Question about pipe simulation
Posted by StefanoSpataro on Wed, 29 Jul 2009 09:49:28 GMT
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Before there were two pipe geometry: one with only the beam pipe (pipe.geo), the other even with the target pipe.
Now those files are nlot used anymore. As ralf was writing, the pipe geometry is created inside the PndPipe class.

Subject: Re: Question about pipe simulation
Posted by Jens Sören Lange on Wed, 29 Jul 2009 10:05:12 GMT
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Hi all, but in the trunk/macro/run/run_sim1.C "pipebeamtarget.geo" is still used, and in most of the macros in trunk/macro/emc "pipe.geo" is still used (and these are the macros we refered to at many, many places in the wiki ...). cheers, Soeren

Subject: Re: Question about pipe simulation
Posted by StefanoSpataro on Wed, 29 Jul 2009 10:12:58 GMT
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The lines are present, but if you comment them out you will see no difference. Simply those macros were never updated and the line was never removed. But there are no differences if you decide to leave it there.

Subject: Re: Question about pipe simulation
Posted by Jens Sören Lange on Wed, 29 Jul 2009 10:32:39 GMT
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just to make sure, "no difference" means that you can use the class and the geo files at the same time and there is no geometry overlap?

Subject: Re: Question about pipe simulation
Posted by StefanoSpataro on Wed, 29 Jul 2009 10:35:32 GMT
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It means the ASCII file is not supported anymore, and the line:

Pipe->SetGeometryFileName("pipe.geo");

is just a dummy line, and it doing exactly nothing. You will use ALWAYS the class geometry, the ascii is not created at all anymore.

I hope now the sitatuon is clearer.

Subject: Re: Question about pipe simulation
Posted by donghee on Thu, 30 Jul 2009 08:26:25 GMT
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Dear all,

Is the beam pipe slightly bent or just straight in the PndPipe object?
What is the current design for beam pipe? Is is correlated with
bending dipole magnet, DCH hole(dead zone) and Lumi position?

Does anyone know about it?

Thank you.
Donghee

Subject: Re: Question about pipe simulation
Posted by StefanoSpataro on Thu, 30 Jul 2009 09:54:49 GMT
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The Pipe is straight in PndPipe.

Subject: Re: Question about pipe simulation
Posted by donghee on Thu, 30 Jul 2009 10:42:34 GMT
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Dear all,

When will the bent pipeline be come (or released)?
Timeline?

Ciao
Donghee

Subject: Re: Question about pipe simulation
Posted by StefanoSpataro on Thu, 30 Jul 2009 10:55:03 GMT
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Nobody is working on this task at the moment.
If you want you are welcome to write the bent geometry, so that everybody will be able to use it.

Subject: Re: Question about pipe simulation
Posted by donghee on Thu, 30 Jul 2009 11:09:35 GMT
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Dear stefano,

I think that one has to consider other thing.
When a curvature pipe is introduced, then at same time DCH and RICH, HCAL, Lumi monitor have to be also relocated.

Ciao,
Donghee

Subject: Re: Question about pipe simulation

Posted by donghee on Mon, 03 Aug 2009 12:57:19 GMT
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Dear Panda users,

I want to get how the information of pipe geometry access from below numbers in passive/PndPipe.cxx.

Quote:
```
Double_t parPipeRight[18] = { 0., 360., 5,
   20.,  .8873, .9,
   22., 2.073, 2.1,
   120., 2.05,  2.1,
   300.1, 2.85,  2.9,
   1050., 5.4,   5.5};
```

This numbers correspond to geometry of the beam pipe into the forward spectrometer direction.
0 to 360 is phi angle, and 5 is the distinction at 5 different z position.
And the difference between .8873 and .9 in the second line represents the thickness of beam pipe from x=0, y=0, z=20. Then one can build a cylinder shape.

How can I give shifted x and y in this scheme?

Best wishes,
Donghee Kang

Subject: Re: Question about pipe simulation
Posted by StefanoSpataro on Mon, 03 Aug 2009 13:04:17 GMT
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This is just the forward (right) part of the pipe. You will find also the numbers "left" and "center". The translation matrix is defined a bit later in the code, when you do AddNode. In this case there is no translation.

Subject: Re: Question about pipe simulation
Posted by donghee on Mon, 03 Aug 2009 13:31:33 GMT
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Dear Stepano,

I don't need to care about left and center because we want to make a bending pipe at forward direction.
In more detail, the connection part of center with right will not change, only middle of right beam pipe should be changed after target spectrometer.
I think you can make a translation after changing your new beam pipe with addnode at the end, if you can correctly handle the correlation of Vacuum and material part.

```
TGeoPcon *pipeRight        = new TGeoPcon(parPipeRight);
```

TGeoPcon *pipeVacuumRight = new TGeoPcon(parPipeVacuumRight);

I think that the translation matrix would be worked if I define these two coordinate. Why do you think there is no translation?

Donghee

Subject: Re: Question about pipe simulation
Posted by StefanoSpataro on Mon, 03 Aug 2009 13:41:35 GMT
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donghee wrote on Mon, 03 August 2009 15:31Why do you think there is no translation?

beamPipe->AddNode(volPipeRight, 0);

No translation matrix is here defined.
