Subject: Geometry
Posted by StefanoSpataro on Tue, 15 May 2007 15:09:36 GMT
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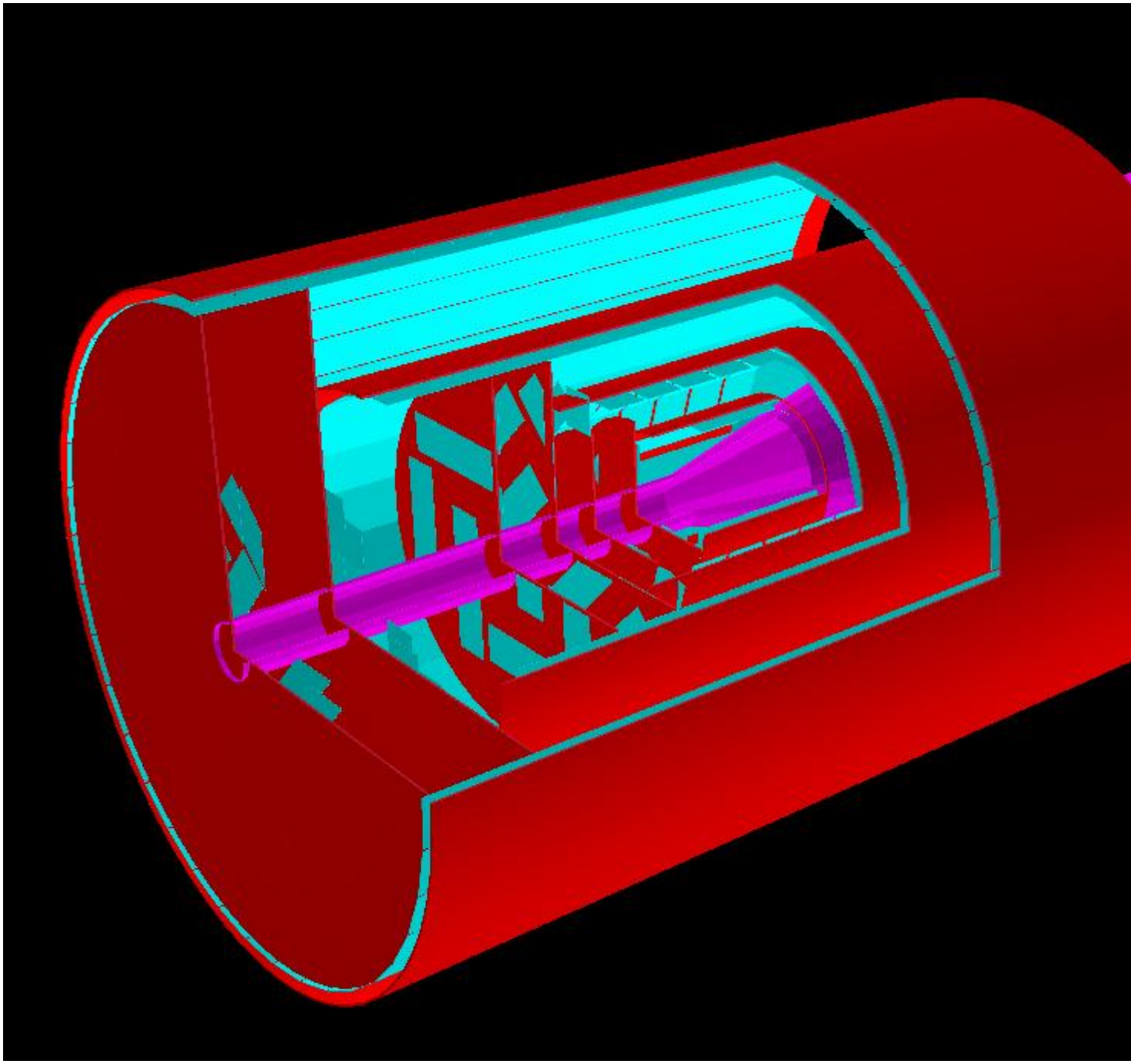
Hi Ralf,
today I committed an update on the beampipe geometry, and I wanted to take a look into what is happening inside the region of the vertex detector (MVD_Rev14b_Corr+Dead.geo):

It seems that the forward disks (I think the dead layers) are completely full, and there is no space for the beampipe -> there is overlap between volumes.
I don't know exactly how the geometry will look like, but is it possible to open one hole so that at least we do not have overlap there?

We should even start to think on how to handle the vertical target pipe, we should open a hole (or better two) inside the MVD, EMC, DIRC and the magnet yoke...

File Attachments

1) vertex.JPG, downloaded 3213 times



Subject: Re: MVD Development Discussion
Posted by Ralf Kliemt on Wed, 16 May 2007 07:37:20 GMT
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Hi Stefano,
Tobias has an updated geometry from the CAD files, with a detailed support structure and cooling. However the implementation is not ready yet.

Ralf.

Subject: Re: MVD Development Discussion
Posted by Tobias Stockmanns on Tue, 22 May 2007 06:42:47 GMT
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Hi Stefano,

Mohammad managed to upload Root geometry files into the simulation framework. With my CAD to Root converter I can provide very realistic descriptions of the MVD. The only problem at the moment is that the created hits have no energy. This will be fixed (hopefully) this week by Mohammad. After this the updated code of the Tst(MVD) detector will go into svn.

Cheers,

Tobias

Subject: Re: MVD Development Discussion
Posted by asanchez on Tue, 22 May 2007 08:56:32 GMT
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Hi Tobias, could be possible to know
or if it is veryfresh to have a copy of your
cad2root converter?
thanks a lot
Alicia.

Subject: Re: MVD Development Discussion
Posted by Tobias Stockmanns on Tue, 22 May 2007 09:03:33 GMT
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Hi Ralf,

for sure it is possible to implement this into the MVD classes. I am a bit worried, that you want to remove the TST classes, because I am using them at the moment to further develop my digitization and reconstruction code.

At a certain point we have to merge both developments and I would like to plan this together with you. Thus I would like to arrange a MVD software meeting. One occasion would be the general MVD meeting beginning of June. After this the next possibility for me is from the beginning of August.

Cheers,

Tobias

Subject: Re: MVD Development Discussion
Posted by Tobias Stockmanns on Tue, 22 May 2007 09:08:33 GMT
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Dear Alizia,

for sure you can have a copy of the converter, but it has certain constraints:

- Rene did not get it running in Dresden (and I do not know why).
- Only simple geomtries are supported. It would be best if you have access to the CAD programm which created the step files
- There are some problems with step files comming from CATIA V

Therefore I would suggest that you send me your STEP file and I try to convert it here.

Cheers,

Tobias

Subject: Re: MVD Development Discussion
Posted by asanchez on Tue, 22 May 2007 09:16:38 GMT
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Hi
Actually I create any CATIA file
(with step format), only with AUTOCAD.

Does this converter need a step file?

If it works also with autocad files, i will prepare some copy
with the news changes, and I will send it to you.
thanks a lot
alicia.

Subject: Re: MVD Development Discussion
Posted by Tobias Stockmanns on Tue, 22 May 2007 09:47:28 GMT
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Hi Alicia,

yes the converter needs a STEP file as input. If you have a choice which STEP format to create I would prefere 203 and 214.

Cheers,

Tobias

Subject: Re: MVD Development Discussion
Posted by asanchez on Fri, 25 May 2007 07:22:24 GMT
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hi Ralph
I have taken a look into your updated
mvd directory, specially in the tst directory.

You told me once, that the microstrips can be
implemented by using the pixel class as well.
But i don't see any special selection for strips
calculation in CbmStsHitProducerIdeal(lx,ly,thresholod,noise).

When one call the CbmStsHitProducerIdeal(lx,ly,thresholod,noise)
in the /macro/mvd/runTSTAnaDigi.C, and specifies the values of lx, and ly, you define only pixel in this way, or I'm wrong ?.

If it is correct, where do you specify if you have double sided
layer or if you have only one strips layer?

Sorry if that are so naive questions.

thanks a lot

ALicia.S

Subject: Re: MVD Development Discussion
Posted by Ralf Kliemt on Fri, 25 May 2007 08:11:20 GMT
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Hi Alicia,

You may think of strip detectors like Pixels with one column and several rows. In that way you even may arrange double-sided strip detectors by digitizing the same MC Point once with only one column and once with only one row.

The TST code is the approach from Tobias, now continued with the cad geometry. Since the Mvd has now two approaches (libMvd and libTst) there will be a simulation session in the Mvd subgroup meeting at Juelich (4.-5.6.07). After that we'll definately throw something away. So please don't get confused.

Kind regards, Ralf.

Subject: Re: MVD Development Discussion
Posted by asanchez on Fri, 25 May 2007 08:16:47 GMT
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ok thanks, but then it means, i should look into either the mvd
or into the tst, depending on which version I want to select?

sorry, now i'm really confused.

Subject: Re: MVD Development Discussion
Posted by Tobias Stockmanns on Fri, 25 May 2007 08:53:52 GMT
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Hi Alicia,

do not panik . The TST code is the code I have written for the evaluation of the CbmRoot framework. This code is able to:
- read in either .root or .geo files with geometry information
- generate MC hits in the sensor planes of the detector
- digitize the MC-hits according to the given pixel dimensions (x,y) and, in addition, taking the discriminator threshold and the noise into account
- reconstruct the position of a hit out of the digitized data
- store the digis and the reco points in a root file

All this is done only for pixel detectors. To adopt this to handle the strip part is not a big deal but still has to be done.

Ralf started to write a new pixel detector (the MVD code) based on the work of Rene for the old framework. In our meeting beginning of June we will merge both codes and define how to proceed with the programming work. After this date we will add the strip part.

Can you tell me what you want to do with the MVD code?

Cheers,

Tobias