
Subject: mvd classes

Posted by [asanchez](#) on Thu, 28 Jun 2007 10:49:47 GMT

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Dear all, I will like to use
the MVD classes as example to implement
the silicon detector in hyp directory.

Is it OK for you?

Are there any remark I should follow?

thanks a lot
Alicia S.

Subject: Re: mvd classes

Posted by [asanchez](#) on Thu, 28 Jun 2007 13:40:31 GMT

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Hola Ralf and Tobias and others,

I would like to copy your MVD routines to change them for my Silicon tracker.

Did you experience problems with the structure of this classes, so that you would change anything, when you have to rewrite them?

Or do you think for your purpose everting is fine?

Thanks for your comment,
Alicia

Subject: Re: mvd classes

Posted by [Ralf Kliemt](#) on Thu, 28 Jun 2007 17:03:57 GMT

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Hi Alicia,

We are at a point, where the Pixel digitization is more or less done. The structure will not change very much.

As I remember you have strip sensors. I decided to write a separated Strip part for the Mvd, because there will be possibly non-orthogonal strip sensors (some other skewing angle). This is ongoing now.

If you like, I could send something in the svn (which compiles at least). If you want to learn something I'd suggest to have a look into the MvdHybridHitProducer, thats the pixel digitization.

Then a technical question rises to me: Do you want to implement our Classes from the mvd

directory, or do you want to copy a working snapshot and tune it to your needs?

Ciao, Ralf.

PS: I think Tobias is from now on about 4 weeks vacant.

Subject: Re: mvd classes

Posted by [asanchez](#) on Thu, 28 Jun 2007 17:52:48 GMT

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Hi thank you for answering.

Actually I have already tried to run the mvd classes for the case of the hyp silicon tracker.

I have some questions,
In the Hybrid hitProducer when you ask for GetLocalHitPoint transformation, how will be the coordinates system of the silicon sensor defined? Is the same as the global frame?

in The CalcGlobalPoint(..) method,
what is the difference between the col and colB?
are they both the variable for the column number?

why do you do col += 0.5, what is the meaning of this 0.5?

Sorry for so many questions.

Anyway thank you very much for your answer.

Subject: Re: mvd classes

Posted by [asanchez](#) on Thu, 28 Jun 2007 17:57:03 GMT

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Oh yes
I would like to copy your classes, and then try to tune them depending on the hyp detector needs.
thank you for all.
Alicia.

Subject: Re: mvd classes

Posted by [Ralf Kliemt](#) on Fri, 29 Jun 2007 09:06:49 GMT

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Quote:

In the Hybrid hitProducer when you ask for GetLocalHitPoint transformation , how will be the coordinates system of the silicon sensor defined? Is the same as the global frame?

GetLocalHitPoints(point, posInL, posOutL);

Takes the MvdPoint point (global frame) and converts the in and out points to the local sensor frame (written to posInL and posOutL).

Quote:

in The CalcGlobalPoint(..) method,
what is the difference between the col and colB?
are they both the variable for the column number?

The CalcGlobalPoint Method is a MC-Clustering. It will go outside the Digitization. As far as I know this should not be called in the Exec Of the HybridHitProducer. The col is the column number, which becomes a charge-weighted mean for this cluster. The colB is the non-weighted mean.

Quote:

why do you do col += 0.5, what is the meaning of this 0.5?

I think Tobias made this, because the column numbers are integers of the pixel borders. The output value is just shifted into the middle of the pixel.

I hope this helps.

Regards, Ralf.

Subject: Re: mvd classes

Posted by [asanchez](#) on Fri, 29 Jun 2007 09:13:46 GMT

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Hi again,
concerning the strips detector with a certain stereo angle,
are you going to use the readout model of the cbmgroup.

I mean the two types of strips readout implemented in the cbm software by Volker Friese.
Which one do you think is more feasible?

The single strips layer with up and downstream strips, or those
with a metal layer in between?

Thanks a lot

Alicia s.

Subject: Re: mvd classes
Posted by [asanchez](#) on Fri, 29 Jun 2007 09:15:39 GMT
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thank you very much.

Alicia S.

Subject: Re: mvd classes
Posted by [asanchez](#) on Fri, 29 Jun 2007 09:25:19 GMT
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[quote title=Ralf Kliemt wrote on Fri, 29 June 2007 11:06]Quote:
In the Hybrid hitProducer when you ask for GetLocalHitPoint transformation , how will be the coordinates system of the silicon sensor defined? Is the same as the global frame?

GetLocalHitPoints(point, posInL, posOutL);
Takes the MvdPoint point (global frame) and converts the in and out points to the local sensor frame (written to posInL and posOutL).

Yes that i have already understood, maybe my question was not so clear, I mean
In the global frame my layers (bos xyz)
are defined in the x-z plane(horizontal), with the strips along the x-axis or along the z-axis,

So In the local frame, is this definition kept, I mean is the x-z plane in the global frame the same as in the local frame?

best regards
alicia s.

Subject: Re: mvd classes
Posted by [Ralf Kliemt](#) on Fri, 29 Jun 2007 09:30:28 GMT
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Well Our local frame is the xy plane, sensor thickness in z.

Quote:
concerning the strips detector with a certain stereo angle,
are you going to use the readout model of the cbmgroup.

I mean the two types of strips readout implemented in the cbm software by Volker Friese.
Which one do you thing is more feasible?

The single strips layer with up and downstream strips, or those
with a metal layer in between?

I had no look into the cbm software that is not related to panda. Our strip sensors will be double-sided, so we have one sensor with two strip directions.

Kind regards,
Ralf.

Subject: Re: mvd classes
Posted by [asanchez](#) on Thu, 05 Jul 2007 11:05:58 GMT
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Hi again,
I saw you have included some changes
in the stripHitProcer Class like the skew angle.
Could you tell, how is this angle defined ?
in the XY Local system?

thanks a lot

Alicia.

Subject: Re: mvd classes
Posted by [Ralf Kliemt](#) on Fri, 06 Jul 2007 06:47:32 GMT
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Hi Alicia,

Since we are in Dubna I committed a working snapshot to port the code to my Laptop.
However if I have something finished I'll announce it here.
The skew angle I'd like to introduce is not defined well yet. I'll talk to my group on that when I'm back.

Cheers,
Ralf.

Subject: Re: mvd classes
Posted by [asanchez](#) on Thu, 09 Aug 2007 08:14:00 GMT
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Dear Ralf, and Tobias,
i have already implemented the digitization for the hyp detector
by taking your HybridHit Producer as example.
I have modified the way in which the row and the columns (pixels) are defined, that means, i
have considered when the local system of my layers are in the x-Z or in the Y-Z plane defined,
while your local system is in the X-Y plane defined.
Ok, the point is that
i don't really understand whether it is right or not what i obtain;
Is it possible to send my result to you in order to know if what i'm getting it's Ok or not?

thanks in advance.
Alicia S.

Subject: Re: mvd classes
Posted by [Tobias Stockmanns](#) on Fri, 10 Aug 2007 07:57:49 GMT
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Dear Alicia,

for sure you can send us your files but I am a bit puzzled about your statement that you do not know whether your results are right or not.

I am not sure which version of the HabridHitProducer you are using. The one with the reconstruction of the points (the older one) or the one without the reconstruction. If you are using the older one the easiest way to see whether your simulation is right or not is just to plot the difference between your reconstructed points with the MC points. Depending on the size of your "pixels" you should see a smeared box distribution.

Without the reconstruction the digized hits should cover the full plane of your sensor.

I hope this helps you a bit.

Cheers,

Tobias

Subject: Re: mvd classes
Posted by [asanchez](#) on Fri, 10 Aug 2007 08:26:06 GMT
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hi Tobias,
thank you for your advice i will try it.

cheers Alicia S.
