Subject: More no of Hits than Points
Posted by Vanniarajan Suyam Jothi on Thu, 10 Apr 2008 12:41:10 GMT
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Hello Ralf,
Here I have attached the datas from the points, strip hits and pixel hits. Here as you see, there are 22060 points, and there are 26161 pixel digis and 72212 strip strip digis. During the discussion somebody said there are two side of a strip one gets two digis per point. In that case I would expect 44120 strip digis.

Or Can you tell me if I am missing some thing here?

Cheers,
Vanni

File Attachments
1) out.ps, downloaded 719 times

Subject: Re: More no of Hits than Points
Posted by Ralf Kliemt on Thu, 10 Apr 2008 14:27:16 GMT
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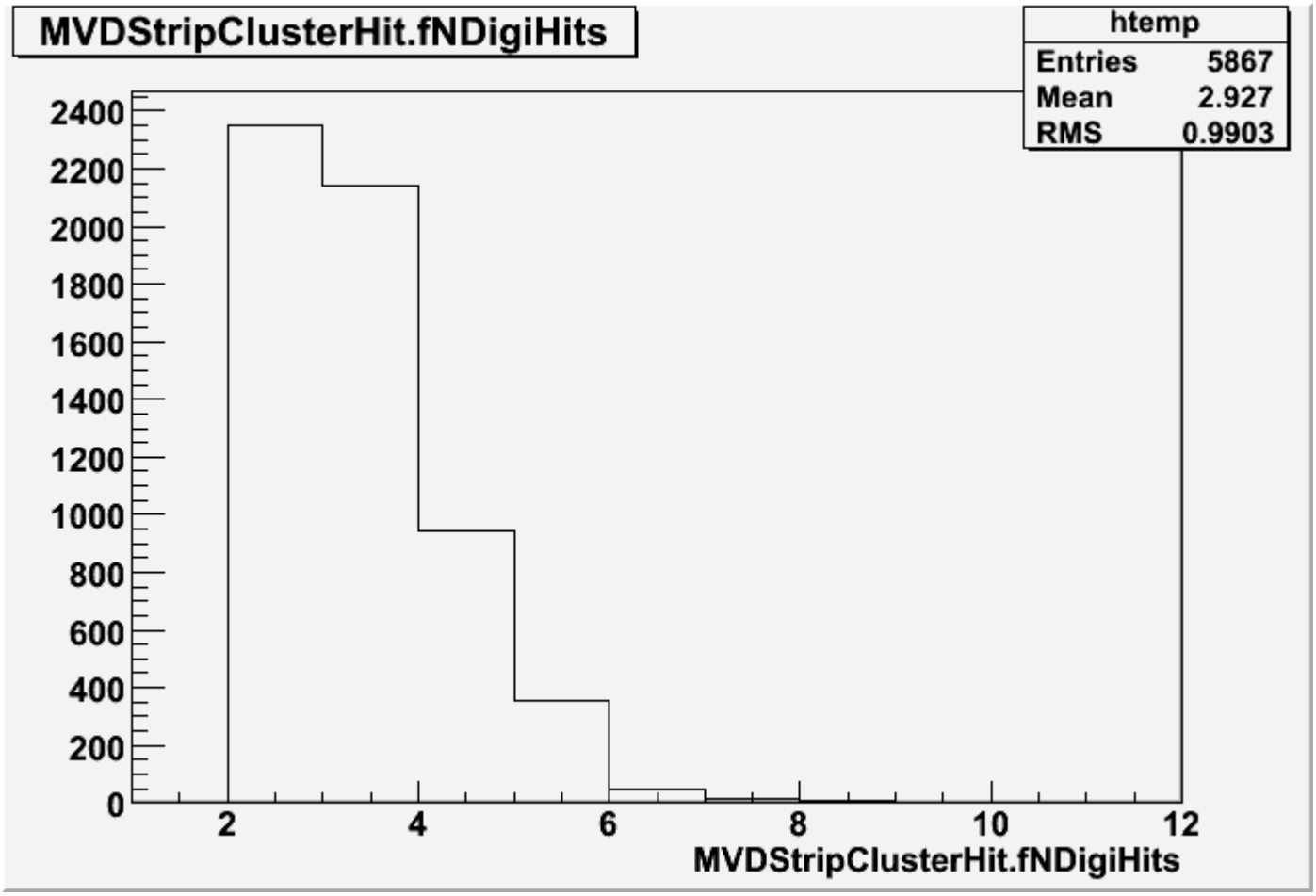
Hello Vanni,

Let me explain how we produce our hits:
First is the simulation storing Points. Each point contains the entry and exit coordinates of the track through the sensor. From this we digitize to column/row information or to top.bottom strip numbers (according to the sensor type).
This results into clusters of several (usually 1-3) Pixel digis or strip digis which produce one Hit.
Maybe you should have a look to the slides from the Collaboration meetings :

To give you an impression I plotted the multiplicity of digis in one hit.
Toggle Spoiler

File Attachments
1) stripclustmult.png, downloaded 976 times



Subject: Re: More no of Hits than Points
Posted by Ralf Kliemt on Thu, 10 Apr 2008 14:35:29 GMT
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The multiplicities are 2.9 for strips and 2.3 for pixels (DPM@6GeV)

So playing with these numbers:(26000/2.2) + (72000/(2.9*2)) = 24200

So this looks OK from my point of view.

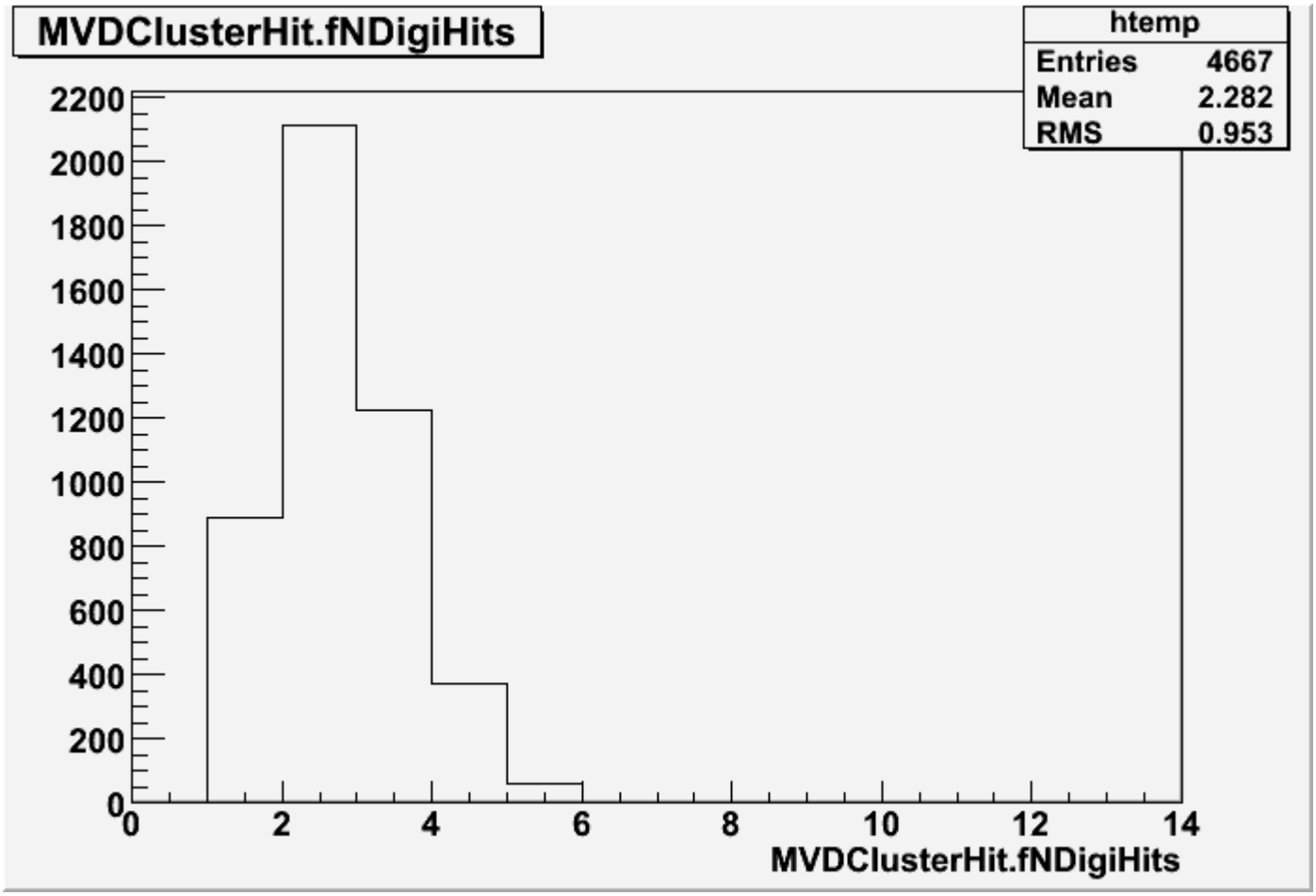
In the end you should have the same order in the numbers of Points and Hits.

Hopefully this helps,

Ralf.

File Attachments

1) pixelclustmult.png, downloaded 948 times



Subject: Re: More no of Hits than Points
Posted by Vanniarajan Suyam Jothi on Thu, 10 Apr 2008 15:07:27 GMT
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Hello Ralf,
The Slides from the Collaboration meeting gives impression that a hit is constructed from 7 points at the first sight.

Now i understand it better. a monte- carlo point goes through several pixel sensors.

Thank you,
Vanni

Subject: Re: More no of Hits than Points
Posted by Ralf Kliemt on Thu, 10 Apr 2008 23:27:51 GMT
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Hi Vanni,

Please don't mix the names. We have Monte-carlo points geometrical motivated digis and reconstructed hits.

So one point leads to several digis and should be found and reconstructed into a hit.

Cheers, Ralf.

PS: I am aware of being too pedantic here, but I like to have it clear. - Ralf