Subject: Track perpendicular to Strip/Pixel
Posted by Shyam Kumar on Sat, 03 Jan 2015 02:54:17 GMT
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Hi All,
I have seen a thing when I am running pid_complete.C, there are several time on the screen Track perpendicular to strip pixel not addded to eloss. Is it for only barrel part (lorentz angle shift will be large since B is in Z-direction) or also forward part (lorentz angle shift will be small). Are the sensors skewed by some angles to neutralize the lorentz effect?.

Thank You
Shyam

Subject: Re: Track perpendicular to Strip/Pixel
Posted by StefanoSpataro on Sat, 03 Jan 2015 11:42:41 GMT
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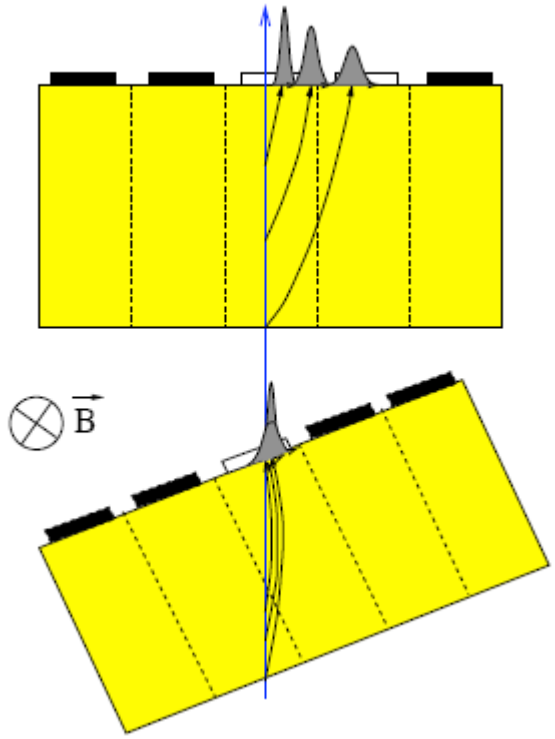
Most probably those hits are bad associated by the pattern recognition or maybe the momentum calculation has some problems there.

Subject: Re: Track perpendicular to Strip/Pixel
Posted by Shyam Kumar on Sat, 03 Jan 2015 12:33:07 GMT
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Hi Stefano,
Thank you for reply, yeah these are bad hits but this effect is neutralized by tilting the sensor as image attached, in which it is shown that the single strip cluster (track perpendicular to strip) can be a multistrip cluster in presence of magnetic field due to lorentz force (hit reconstruction will not be correct) and this effect is neutralized by tilting the sensor. Are the sensors of MVD Tilted to neutralize this effect?

Shyam

File Attachments
1) test.png, downloaded 992 times



Subject: Re: Track perpendicular to Strip/Pixel
Posted by StefanoSpataro on Sat, 03 Jan 2015 14:41:33 GMT
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These tracks are parallel to the sensor, not perpendicular.
In any case, you need to collect energy on more sensors in order to use center-of-mass technique for a better position resolution. if you hit only one sensor then your resolution will be just size/sqrt(12).

Subject: Re: Track perpendicular to Strip/Pixel
Posted by Shyam Kumar on Sat, 03 Jan 2015 16:06:48 GMT
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Thank You, Then I am wrong, I was interpreting these tracks are perpendicular.