Subject: Drift CHamber in forward spectrometer
Posted by donghee on Tue, 26 May 2009 09:42:08 GMT
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Dear Panda Family,

Where are exatly located DCH(Drift chamber) in forward spectrometer.
I couldn't find this info in the physics book.
In the histogram DchDigiProdcerHistos, which is produced in digitization, I found 9 timeing information(as histograms),
but first 3 histograms from 0 to 2 are empty, and other 6 histograms are filled.
I assume that DCH has 6 stations before dipole magnet and after dipole magnet.
Could you give some correction or useful figure to understand dch geometrical setup.

If you have a schematic view in y=0 plane,
that would be great.

Thank you!

Subject: Re: Drift CHamber in forward spectrometer
Posted by Aleksandra Wronska on Tue, 26 May 2009 10:07:59 GMT
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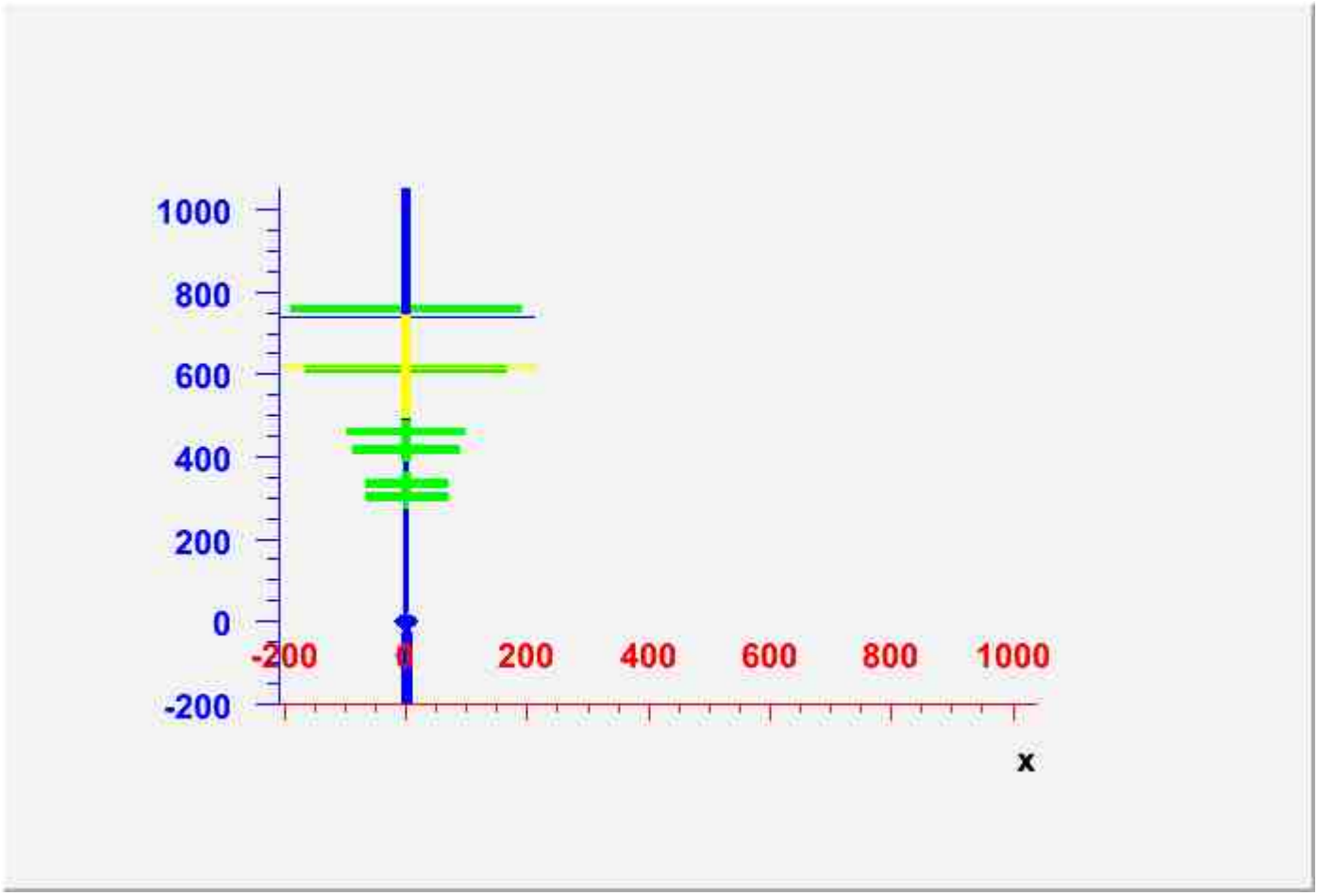
Hi,

originally, there were two packs of dch foreseen for the target spectrometer as well. Now, after the GEMs have been introduced, they are not created anymore. So what's left are two chambers upstream the dipole, two inside of the dipole yoke hole, and two downstream the dipole.

Currently the chambers are located at z=305., 337., 418., 462., 615., 760. cm. However, the last position may change if we interchange the last chamber and the RICH detector - this has to be studied.

cheers,
ola

File Attachments
1) c1.jpg, downloaded 1536 times



Subject: Re: Drift CHamber in forward spectrometer
Posted by donghee on Tue, 26 May 2009 10:34:32 GMT
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Dear Aleksandra,

Thank you for your nice explanation!

If you have a look my plot, which is produced from the proton in mostly forward direction, you can see 3 holes from reconstructed dch tracking in xy view.
3 different holes are appeared at 0.0cm, +30cm and +60cm in positive x-direction.
Could you explain what is that?
I know that at 0.0cm probably there is beam pipe

Thank you!

File Attachments

1) dch_xyview.eps, downloaded 503 times

Subject: Re: Drift CHamber in forward spectrometer

Posted by Aleksandra Wronska on Tue, 26 May 2009 10:47:12 GMT
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Hi again,

you probably draw MCPoints from all detectors in one picture. Indeed, what you see at (0,0) is a beam pipe hole on the first chamber. The image of it on the detectors further downstream goes towards right because of the tracks deflection in the magnetic field.

cheers,
ola