
Subject: Solenoid field effect on the particle track theta!
Posted by [Huagen Xu](#) on Mon, 17 Aug 2009 12:09:02 GMT
[View Forum Message](#) <> [Reply to Message](#)

Dear solenoid field experts,

Here I'd like to escalate a problem which I came across during the simulation for luminosity monitor detector. The problem is the solenoid field would bend the particles emitting from IP toward beam axis, for the worst case, the particle track theta would be shifted about $0.5\text{mrad}@1.5\text{GeV}/c$ for antiproton. Attached is the MC points plot on the 4 luminosity sensors viewed on xy plane with field and with no field. This effect absolutely would impact the theta resolution which was determined by the luminosity monitor detector.
Is this effect is normal or abnormal for solenoid field?

Best Regards!
Huagen Xu
IKP, Juelich

File Attachments

1) [Field effect.pdf](#), downloaded 372 times
