Subject: Re: Helix and FairTrackParH
Posted by StefanoSpataro on Thu, 23 Jul 2009 11:00:48 GMT
View Forum Message <> Reply to Message

Hello,
thanks for the Wittek paper. I have read it and found the formula for the momenta:

px = p cos(lambda) cos(phi)
py = p cos(lambda) sin(phi)
pz = p sin(lambda)

(which is also present in your tracking report).
But this is just the "static" relation between angles and momentum coordinated in a well defined point. What I need is the coordinated px py pz along the track, starting from the first point up to the last point (where pz remains constant, while px and py rotate). Therefore, this formula does not help me.

In Lia's thesis, page 42 (50 in the pdf), there is the following formula:

x(s) = x0 + Rh[cos(phi0+h s cos(lambda)/Rh) - cos(phi0)]
y(s) = y0 + Rh[sin(phi0+h s cos(lambda)/Rh) - sin(phi0)]
z(s) = z0 + s sin(lambda)

but unfortunately nothing for momenta.
Are those parameters (phi0 lambda R) the same of the ones in FairTrackParH? Is it possible to use this representation as it is with our trackbase code, or maybe x0 y0 z0 are calcualted ina well defined point, phi0 is defined in a different way, and so on?

Thanks in advance to everybody who could answer to my questions.