
Subject: Charge in LheTrack and Kalman

Posted by [Susanna Costanza](#) on Fri, 21 May 2010 16:05:06 GMT

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Dear all,

I have realized that in some cases (about 3% of the total number of tracks) the charge of the track is different if got from TrackParamFirst or TrackParamLast of LheGenTrack. How is it possible?

Another thing I have noticed is that the charge of the same track is different if obtained from LheTrack (usually equal to the MC charge) or from LheGenTrack.

Is there a point, in the Kalman filter, where the charge is set again? Do you have any idea about what is going on?

Thank you in advance.

Susanna

Subject: Re: Charge in LheTrack and Kalman

Posted by [Anonymous Poster](#) on Fri, 21 May 2010 16:08:37 GMT

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Hi Lia,

in principle the charge can change in the fit. q/p , i.e. the signed curvature is a variable of the fit. It could be possible in some cases (very few hits close to each other, very high momenta,) that the sign of q/p can be wrongly reconstructed. q/p has a finite resolution. The track topology of these 3% of tracks must be special...

Cheers, Christian
