
Subject: Re: WirepointHitPolicy detplane implementation
Posted by [Anonymous Poster](#) on Mon, 23 Mar 2009 12:32:25 GMT
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Hi Ola & Lia,

on second thought, I think it is necessary to have two hit policies for detectors which can measure a position along the wire and those which can not. The reason is the dimensionality of the hit. The DCH hit is only a 1-D information. There for the correct HMatrix (OK, this has nothing to do with the policy) would be 5x1 and would be [0,0,0,1,0] assuming that the U-vector points perpendicular to the wire, like it does.

Also in the policy, where you also fix the dimensionality when you calculate the hit coordinates and covariances this should be dont correctly.

It is true that just putting the coordinate to zero with a huge errors will lead to an unbiased fit, but the number of degrees of freedom for the chi2 calculation will be wrong.

If you dont have any objections I will introduce a new policy WireHitPolicy (without the point) which will do this correctly. I would then still ask you to check the detPlane() method for your choice of detector plane before you use it.

Does that make sense? Would you have some time to test this new implementation?

Cheers, Christian
