

Hi again,

I have a very simple solution for your distance cut: Put a

protected:

```
double _maxDistance
```

in WirepointHitPolicy. Then make a WirepointHitPlicy which loks something like this

```
const DetPlane&
SpacepointHitPolicy::detPlane(AbsRecoHit* hit, AbsTrackRep* rep)
{
    TMatrixT<double> rawcoord = hit->getRawHitCoord();
    //I dont know which of the 8 params is for the wire points
    TVector3 point1(rawcoord[0][0],rawcoord[1][0],rawcoord[2][0]);
    TVector3 point2(rawcoord[3][0],rawcoord[4][0],rawcoord[5][0]);
    int dimension = rep->getDim();
    TMatrixT<double> statePred(dimension,1);
    TMatrixT<double> covPred(dimension,dimension);
    //note that _plane is defined in AbsTrackRep
    TVector3 poca=rep->extrapolateToLine(point1,point2,statePred,covPred,_plane);

    /*C. Hoepfner, March 09: I am not entirely sure that these two calls
    are needed, but they dont hurt for sure. Something happens here
    to the orientation of u and v, so keep it.*/
    TVector3 m=_plane.getNormal();
    _plane.setNormal(m);

    //now calculate distance of poca to line between point1 and point2
    double distance;
    if(distance>_maxDistance) {
        cout << "vpf greater than maxVale" << endl;
        FitterException exc("distance vpf-wire larger than maxVale", __LINE__,__FILE__);
        throw exc;
    }

    return _plane;
}
```

For the DCH where you dont want this distance cut, just set the _maxDistance (do this in the constructors of the recoHits) to a very large value. Or you can use a bool flag to deactivate this feature. This you would also be set in the ctors.

About the origin of the plane: can you come to a common solution? Is Lia's solution OK for you Ola?

Thanks for your support!

Christian
