Subject: Covariance Matrices in RhoCandidates
Posted by SHenssler on Tue, 25 Mar 2014 13:51:53 GMT
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Hello together,

I am currently evaulating alternative procedures for kinematic fitting and while doing some debugging i noticed, that the Covariance-Matrices i get are not positive-semi-definite.
I used the Rho-Macro for the kinematic fits and simply called my own routine after the vertex-fit was done (instead of calling the PndKinFitter).
My program also implements RhoFitterBase and after calling:

fDaughters.clear();
FindAndAddFinalStateDaughters(fHeadOfTree);

i take the P4-vectors and their covariances for each final state particle.
When i calcualte the eigenvectors for the covariances there are always some who are negative, which means the covariance matrices are not positive-semi-definite (i calculated the eigenvectors by hand for one example to make sure it is not a numeric problem and i get the same results).

Does anybody know something about this?

Thanks in andvance

Simon Henssler