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## A kinematic and a decay chain reconstruction library

*Thursday 30 September 2004 16:50 (20 minutes)*

A kinematic fit package was developed based on Least Means Squared minimization with Lagrange multipliers and Kalman filter techniques and implemented in the framework of the CMS reconstruction program. The package allows full decay chain reconstruction from final state to primary vertex according to the given decay model. The class framework allowing decay tree description on every reconstruction step will be described in details. Package extension to any type of physics object reconstructed in CMS, integration to general CMS reconstruction framework and related questions will be discussed. Examples of decay chain models, constraints and their application on Bs reconstruction will be presented.

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