

Status and Plans  
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# Status(S) and Plans(P)

- (S)Lambda Kinematic Fitting is functioning. Demonstrated with pure MC simulation. (single particles, controlled errors etc.)
- (S)FindVertex (MpdParticle) fails in certain cases.  
(P) Why does it fail?
- (S)Lambda parameters after KinFit seem to be slightly closer to MC parameters than only MpdParticle parameters. There is also the mass benefit.  
(P) How to test actual benefit?
- (S) Error and Pull for parameters of secondary particles seem to be too large.  
(P)Should be investigated, how, possibly reduced?  
^Important for all secondary reconstruction.
- (P) Test  $p_T$  vs  $1/p_T$  parametrization for kinematic fitting.  
^As suggested by AZ this parametrization could be more beneficial, should be investigated

# More Plans

- Implement Kinematic fitting functions to MpdParticle class.
  - Apply to UrQMD reconstructed events with high statistics.
  - Test on other two decay particles. (box, UrQMD)
  - Test on three decay particles. (Xi, Omega)
  - Implement 2C fit. Compare 2x1C fit vs 2C fit or reco events.
  - Optimistic time frame – middle of April.
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- Move back to elliptic flow studies: revisit old code; redesign/simplify (start from scratch/consult with MEPHI); implement FHCAL for event plane; study hyperon elliptic flow