

V0 mDST Object

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Recovering the Absolut Vertex Position

Problem

- Perigee parameters are stored respectivly to the vertex position.
- When read from the mDST, the vertex position can not be recovered.

Proposal I

- Extrapolate the track from the vertex position to the perigee with a simple helix.
- Issues:
 - Consistency of the magnetic field.
 - Handling of the errors of the track parameters when extrapolated.

Proposal II

- Store an additional displacement vector (the vertex position).
- With this additional information everything can be recovered.

Storing Different Hypotheses

New Concept

- Back to the roots: every V0 stores 2 Tracks and 2 TrackFitResults.
- For each found V0 vertex:
 - Store as K_S^0 .
 - If the V0 satisfies a γ , Λ or $\bar{\Lambda}$ mass cut, store it additional.
- Reusing the π is still possible.
- For now we can store only the K_S^0 and add the other hypotheses later without breaking anything.
- The hypothesis under which the V0 was created is available via the track hypothesis.