Global Reconstruction

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FOOT Software meeting

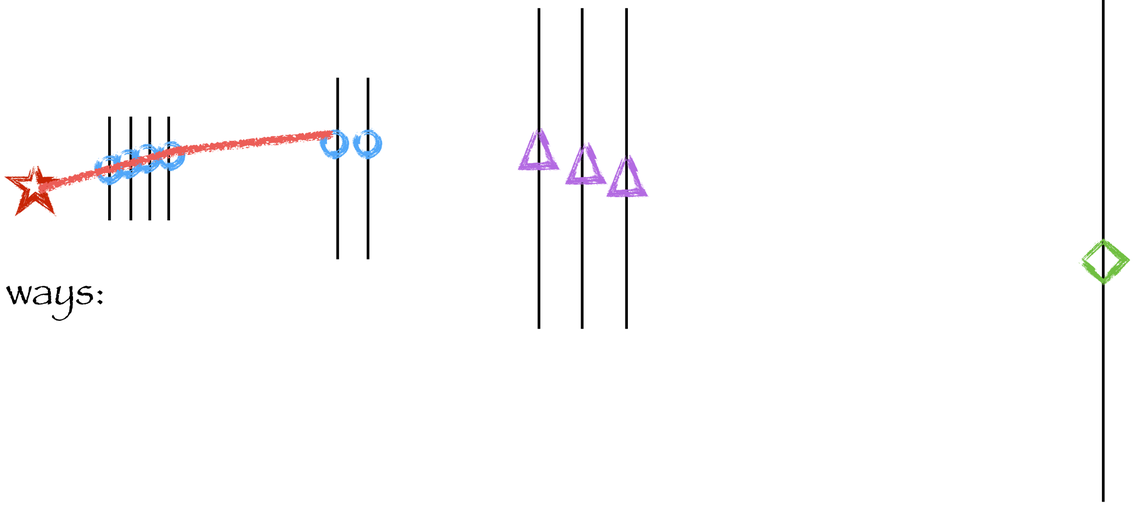
Status

- Merge of the Genfit GlobalReco branch into master (thanks Alessio for the help)
- TAGactKFitter is the kalman filter Action class
  - Takes all clusters/points
  - Out: GlobalTrackRepostory object -> that is a collection of GlobalTrackKalman objects
- GlobalTrackKalman: class containing all the tracks info (pos, mom, charge, tracking info, ...). It is saved in output ntuple, ready to be used.

Global tracking

- General idea: reconstruct the fragments tracks starting from VT+IT+MSD(+TW) hits using Kalman Filter. Very good performance tested already on MC and old configuration.

- Strategy in pills:
  - Using the interaction point as a seed
  - Starting using clusters from VTX simple straight tracks
  - Extrapolate each one to the IT. Find the closer cluster in 2 possible ways:
    - Form MC PDFs
    - Kalman prefit
  - Redo the same for MSD hits
  - Extrapolate to Scintillator and retrive the charge -> use it for P evaluation



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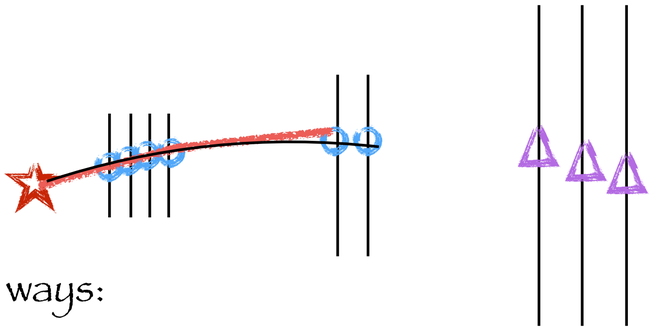

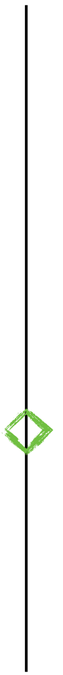

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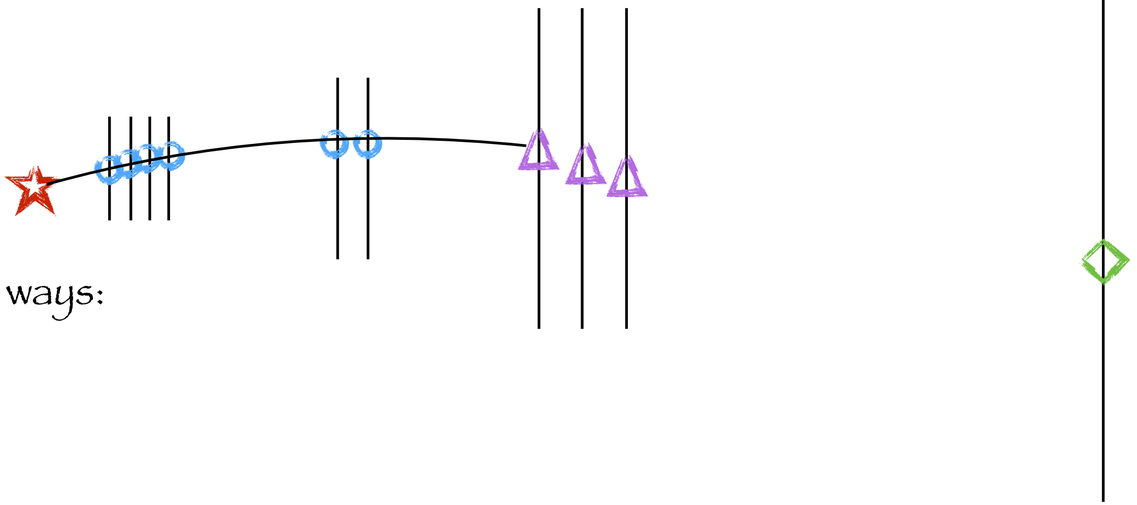

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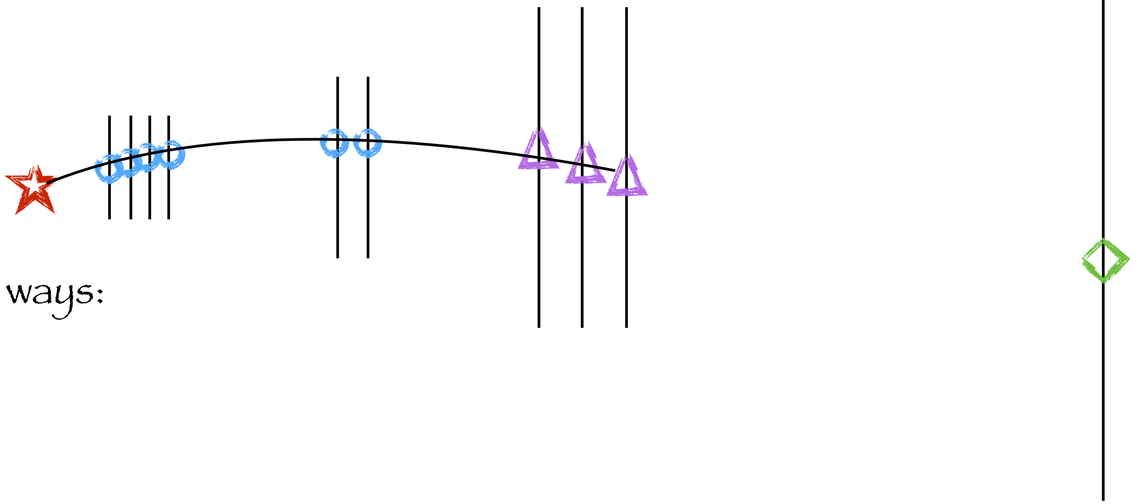

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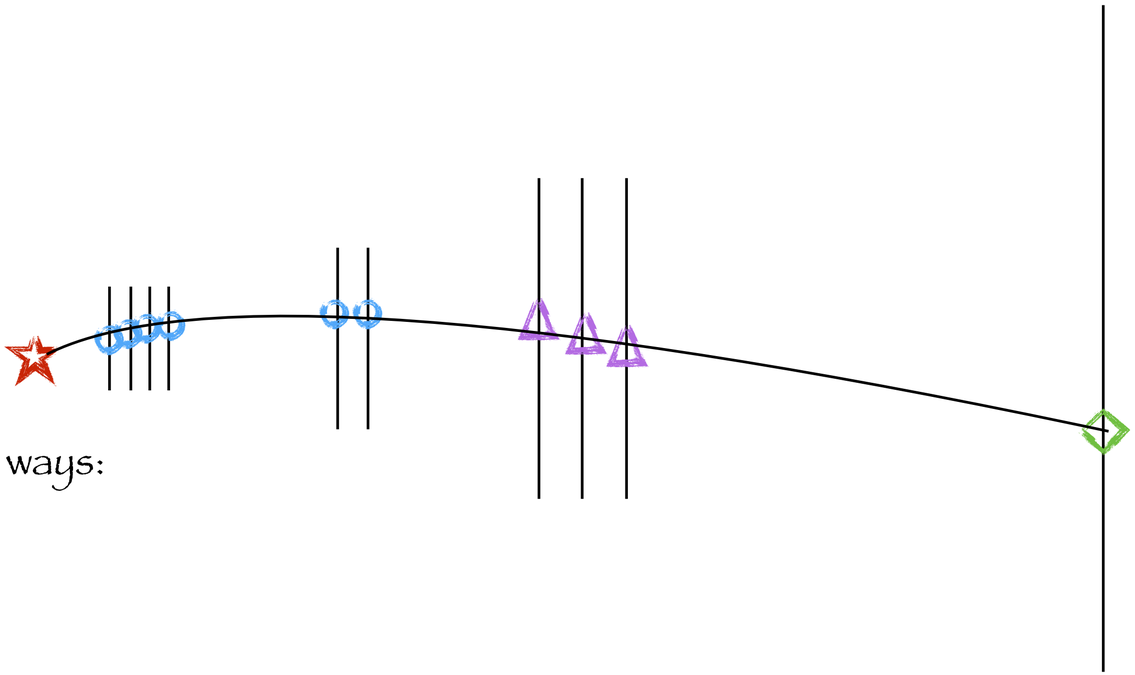
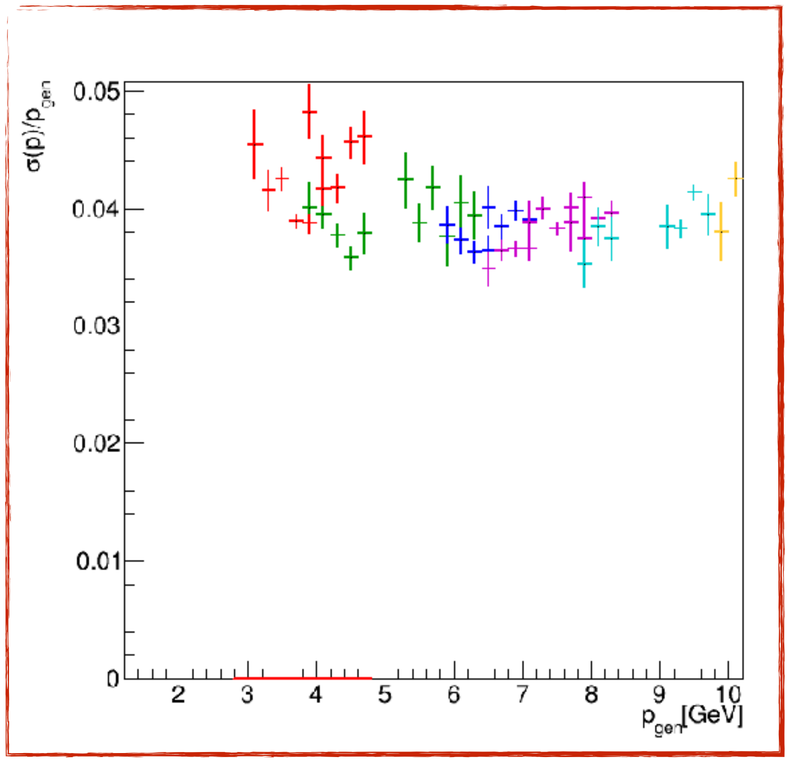


Ongoing Work

- Currently rewriting part of the kalman class to make it more flexible and fast. (New branch)
- Reproduce results obtained with old version of the code
- We'd like to uniform the global reconstruction output class starting from the TAGtrack class used by TOE. An idea could be:
  - Make it a base parent class (some modification to propose)
  - Use something like TAGtrackTOE and TAGtrackGenfit for specific algorithm variable storing
- Keep different algorithms in parallel with different performance/setups

..Thats all Folks!..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