Improving Globals: Overview of Current Status

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What's this about?

- We want to extend information currently stored in the global event
- Extension: have downstream track propagated US - either to absorber or all the way to TOF0
- I started implementing this 1/2 year ago, never got to debug the code
- due to incident at Sheffield, my code was lost
- Idea is to pass the task on to Joe

Globals

- Space points from detectors upstream and downstream connected into upstream and downstream tracks
- (upstream and downstream of absorber)
- Tracks created based on PID hypothesis
- Tracks upstream and downstream matched
- Result: Through Track

Track Propagation

- When matching individual parts of the track virtual track points created
- Simulated propagation is done separately for upstream track (USTrack) and downstream track (DSTrack)
- USTrack propagation starts at TKU1 - US tracker plane closest to absorber, ends at TOF0
- DSTrack propagation starts at TKD1 - DS tracker plane closest to absorber, ends at EMR
- USTrack also propagated downstream when being matched with DSTrack

USTrack, DSTrack, ThroughTrack

- USTrack: all Space Points from US detectors + Track Points at all US virtual planes
- DSTrack: all Space Points from DS detectors + Track Points at all DS virtual planes
- ThroughTrack: all from USTrack, Detector points from DSTrack, Points from propagation of USTrack downstream

How to Extend

- Want DSTrack propagated upstream of TKD1
- Can be done in the same fashion as propagation of DSTrack when doing USTrack-DSTrack matching
- Track Points should be stored in DSTrack