

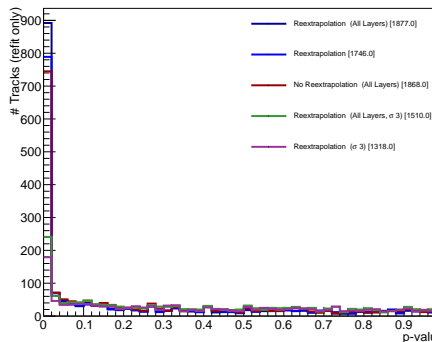
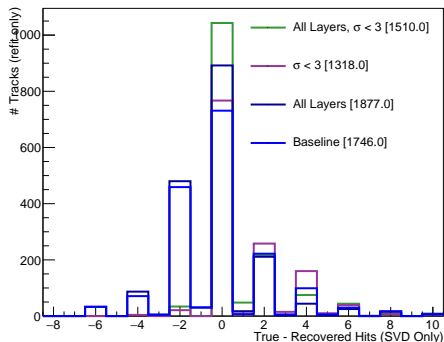
VXD Hit Recovery for Belle 2

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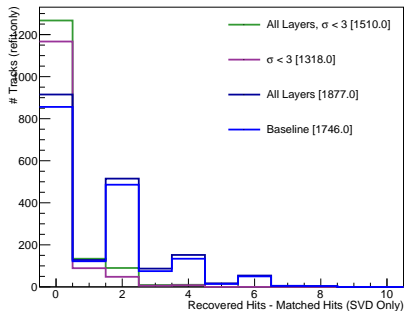
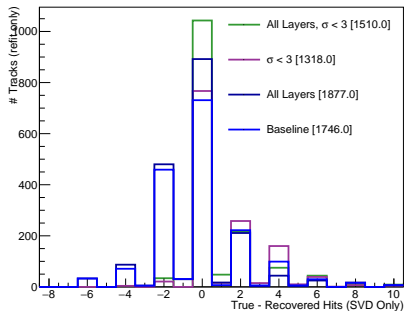
B2 Tracking Meeting
May 8, 2015

Searching all layers



- Adding hits layer by layer, was stopping extrapolation after not finding hit on layer [here showing 1000 events $B^\pm \rightarrow DK^\pm$, $D^0 \rightarrow K_S \pi^+ \pi^-$]
- Dropped this requirement (but still require 2 hits/SVD layer)
- Allowing all layers keeps too many recovered hits and larger low p-val track component but adding the σ_{hit} greatly increases number of fully recovered tracks and significantly reduces low p-val component
- For cf, 1750 tracks with recoverable hits based on MC particle matching

Truth Matched Hits



- Show difference in hits per track again, but also total # recovered hits - # hits matched to MC particle (i.e. shows # incorrectly added hits)
- Even searching all layers, relatively clean when σ cut added

- Thinking about also trying PXD hits, but I can't find how to match PXD hits to MC particles
 - PXDCluster and PXDTrueHits don't seem to have links to MC particles, which container/what setup ought I use?
 - For adding hits to PXD layers, I should search PXDClusters?
- Need to email Tobias about adding cone extrapolation code to genfit
 - Once genfit updated, can start to think about adding code to B2 repo