Offline COT Efficiency

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Offline COT Efficiency

Understanding the offline COT efficiency is critical for using summer data for physics

- Offline tracking efficiency should be effected by COT problems
  - Effect should be smaller than in the triggers
- Forms the denominator for all absolute physics measurements
  - High pt: Exotics, Electroweak and Top
  - Level three trigger efficiencies measured relative to offline reconstructed events
  - Unbiased level 1 track legs measured relative to offline tracks
  - Relative trigger measurements underestimate the effect of the COT problem because the denominator is also suppressed

Plan of action

- Measure magnitude of effect by studying track yields in jet data
  - Not a track based trigger
- Perform W not track measurement for summer data
  - Well defined denominator for tracking studies
- Clean up loose ends
  - make sure that HL tracking efficiency not effected by the beam offset: done - no effect found

Yield effect in jet data

Summer data exhibits and area where the yield is clearly more than a percent lower

Spring data has a smaller effect that could be an oscillation