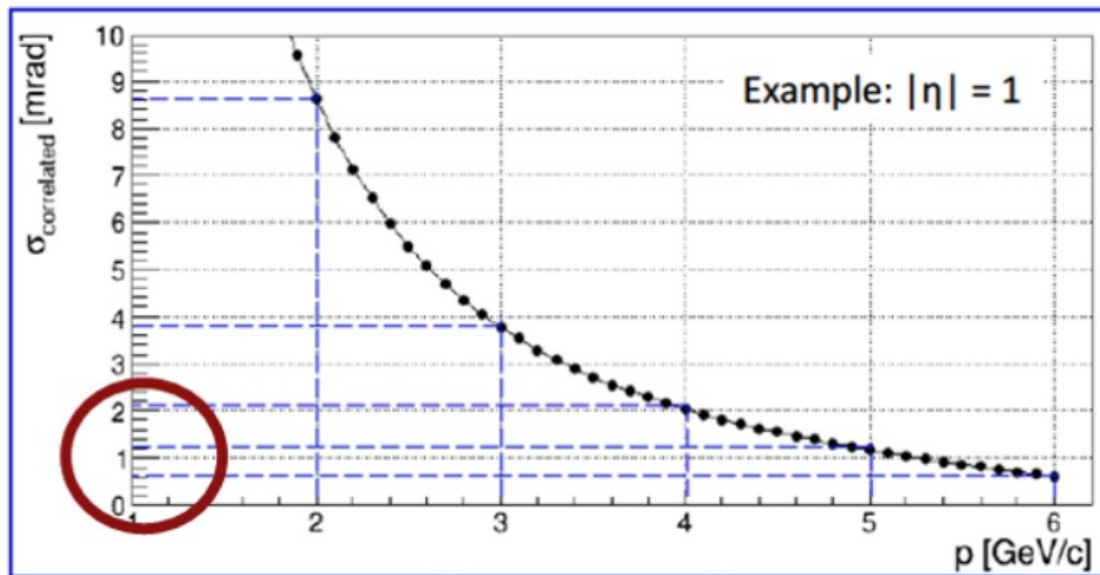
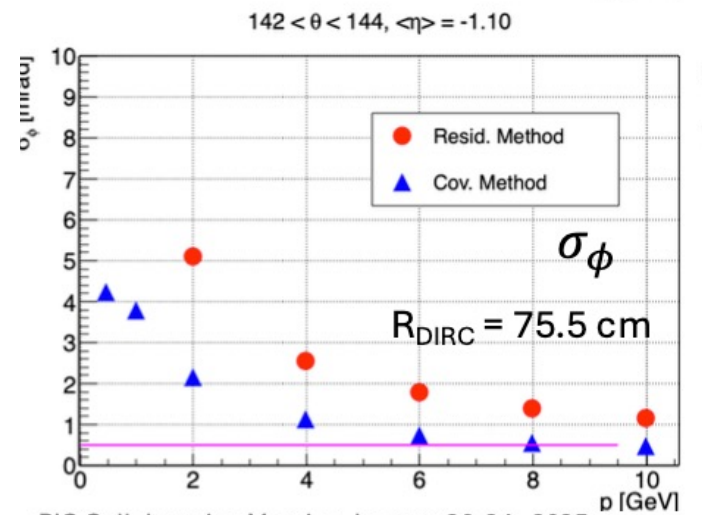
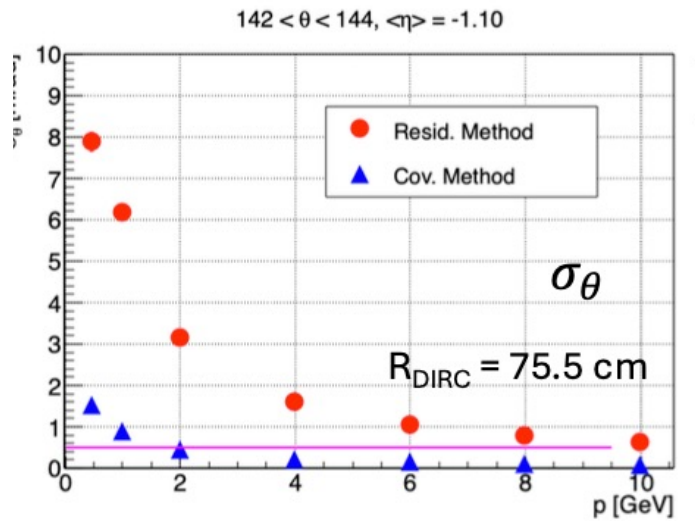


Maximum allowed contribution from *correlated* term while keeping hpDIRC  $\pi/K$  separation power at 3 s.d.



$$\sigma_{\theta_c}^2(\text{particle}) = \sigma_{\theta_c}^2(\text{photon}) / N_\gamma + \sigma_{\text{correlated}}^2$$



## Discussion

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- Understand differences between the various methods used so far
  - Residual, covariance, hit extrapolations
  - **Validate propagated trajectory covariance matrix**

### Optimizing the angular resolutions:

1. Implement Barrel Imaging Calorimeter (BIC) -- initiated by Wouter
  - Epic ([PR #710](#))
  - EICrecon ([PR #1570](#))
  - Study impact on angular resolutions
2. Investigate CKF fitting direction
  - Study impact on angular resolutions
3. Extracting angular resolutions from full track vs. tracklet