

Lepton ID Update

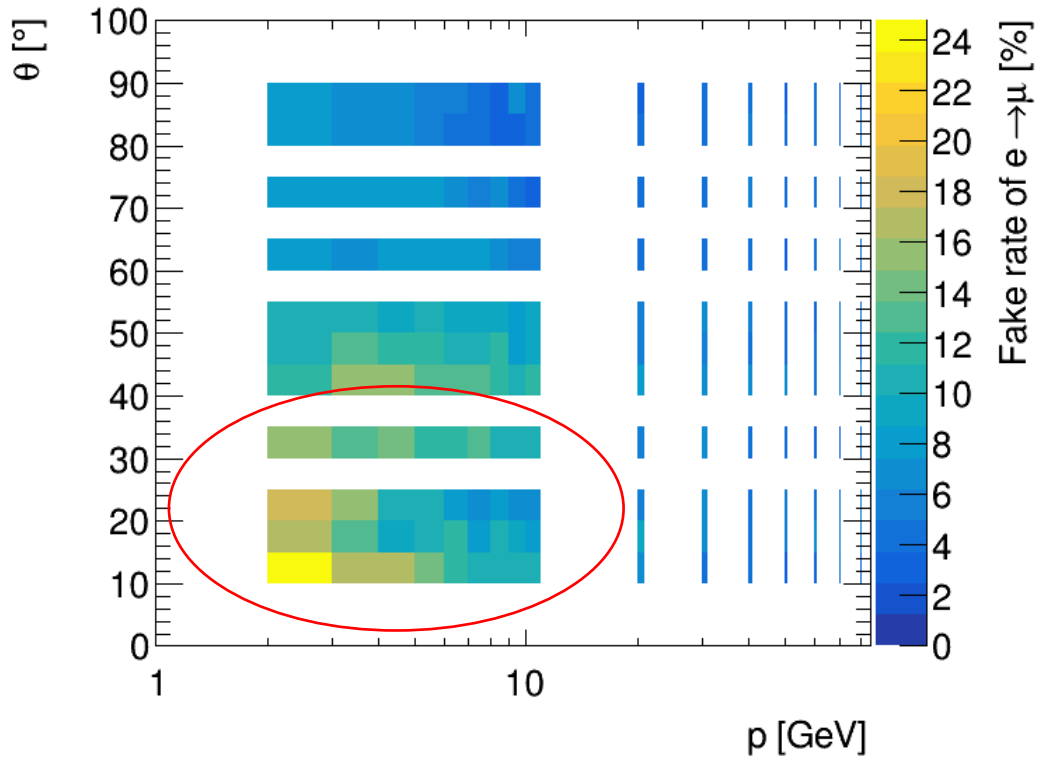
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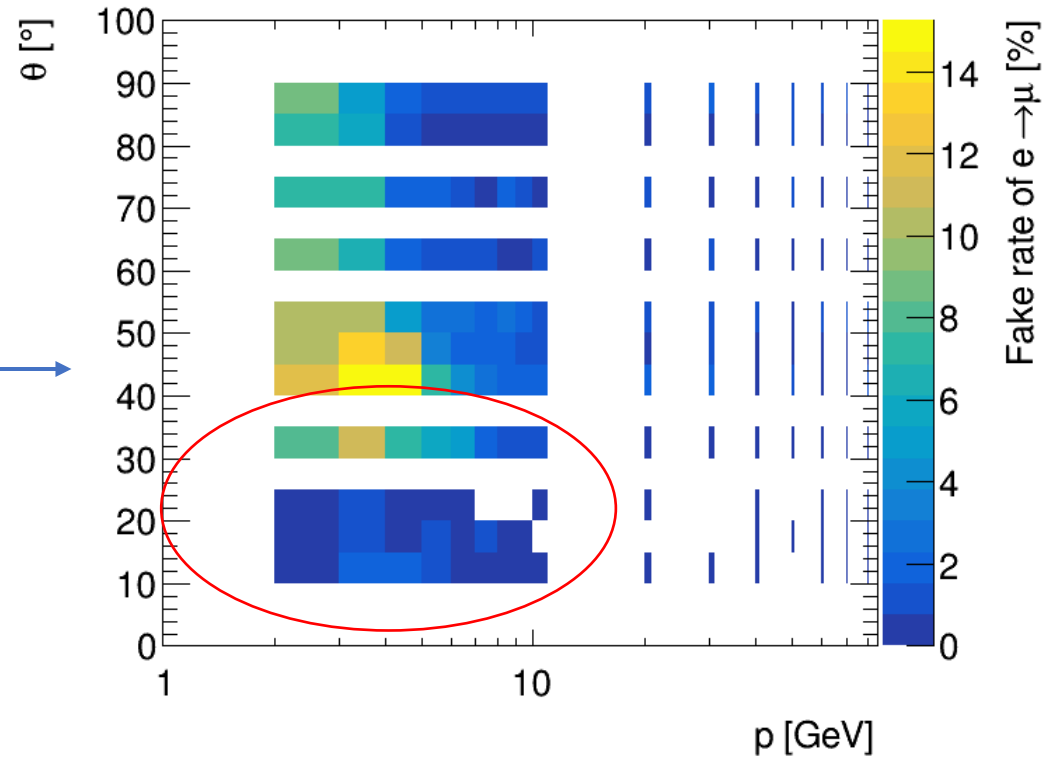
Updates

- 1. add MindR and dd in mulD
- 2. Compare ID efficiency between using MindR and dd

Without vs with MindR(WP 95%)



Without MindR

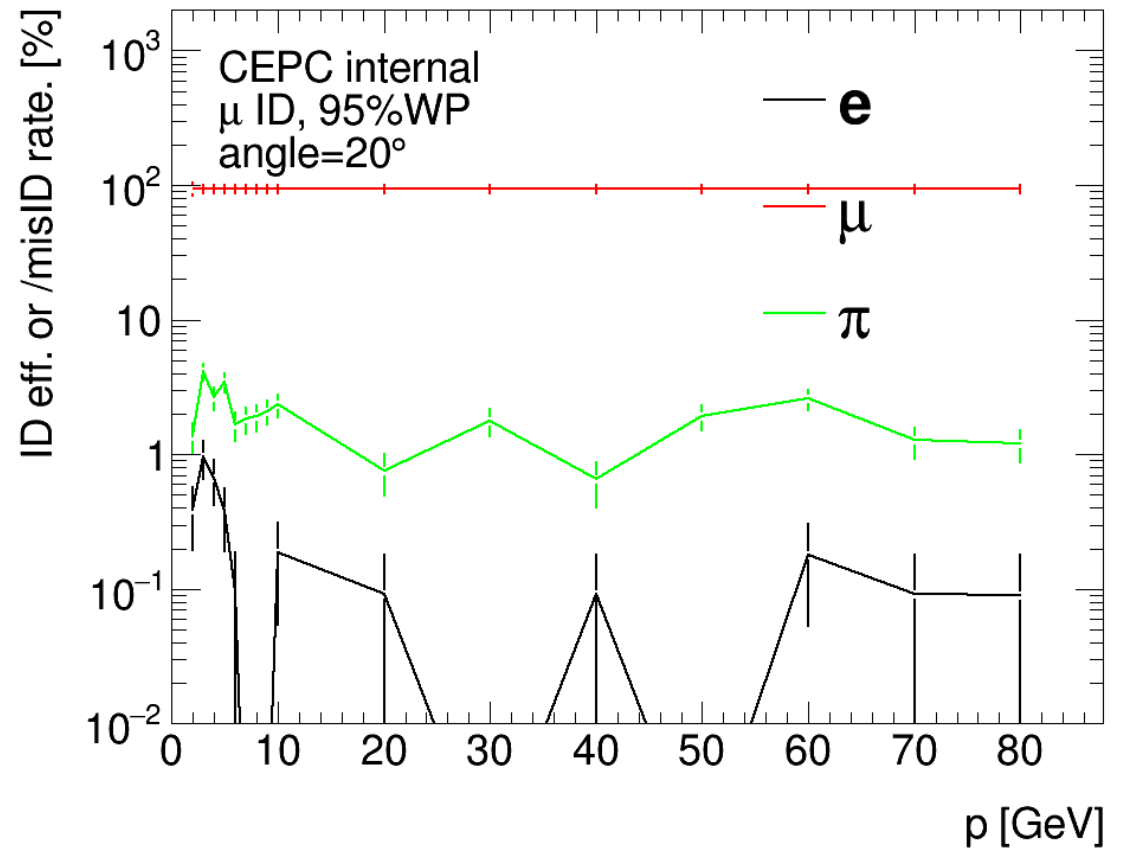
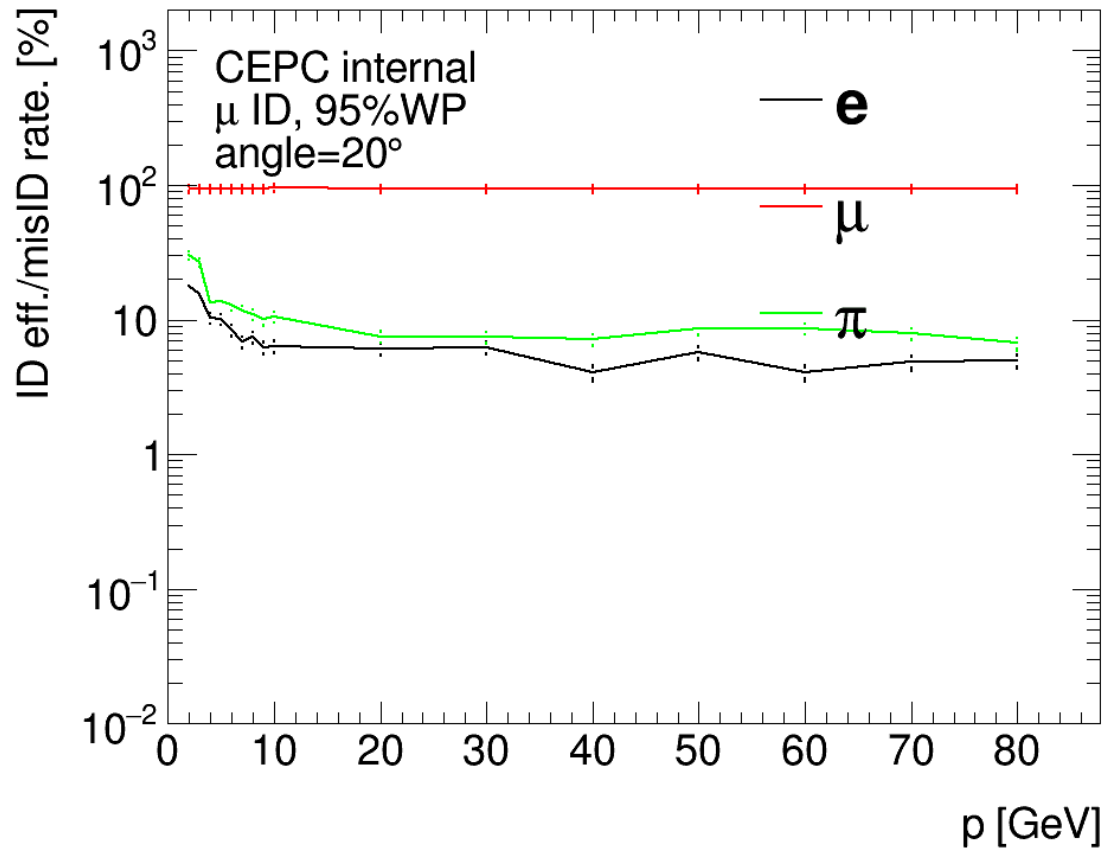


With MindR

After adding MindR, it improves a lot at low momentum and low angle

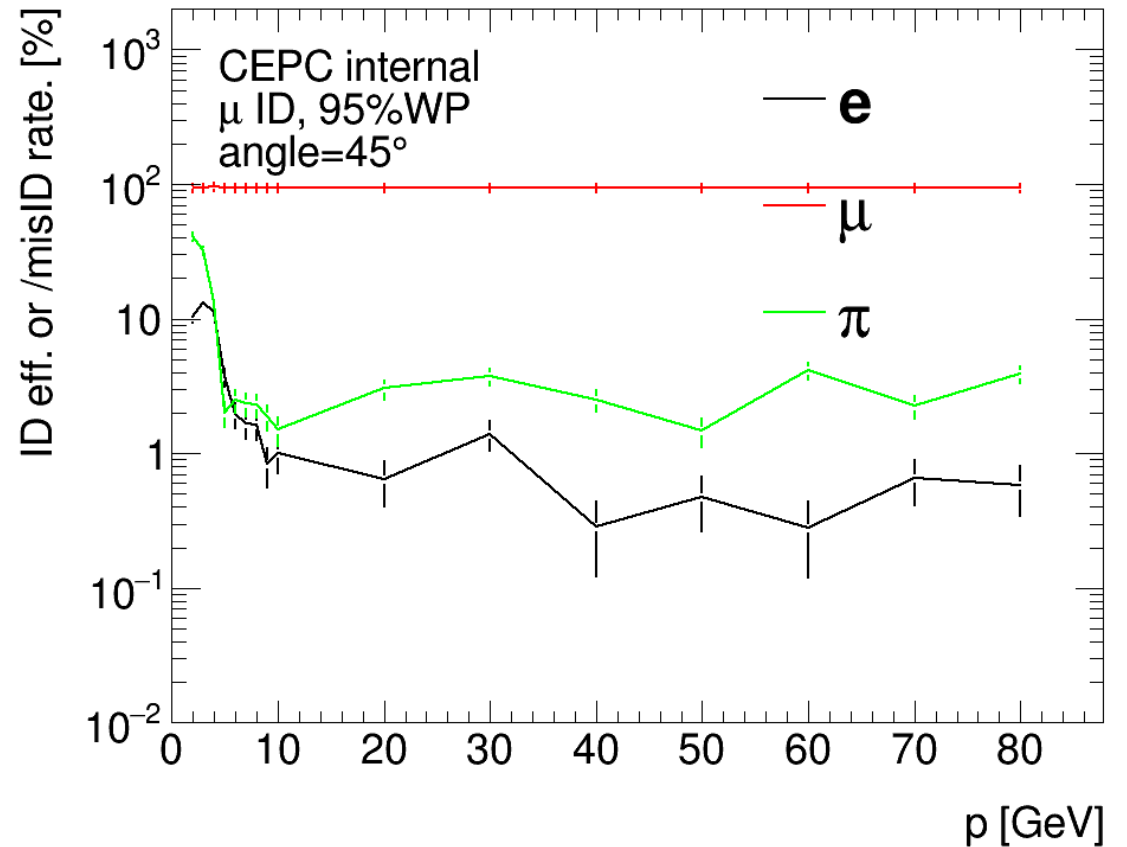
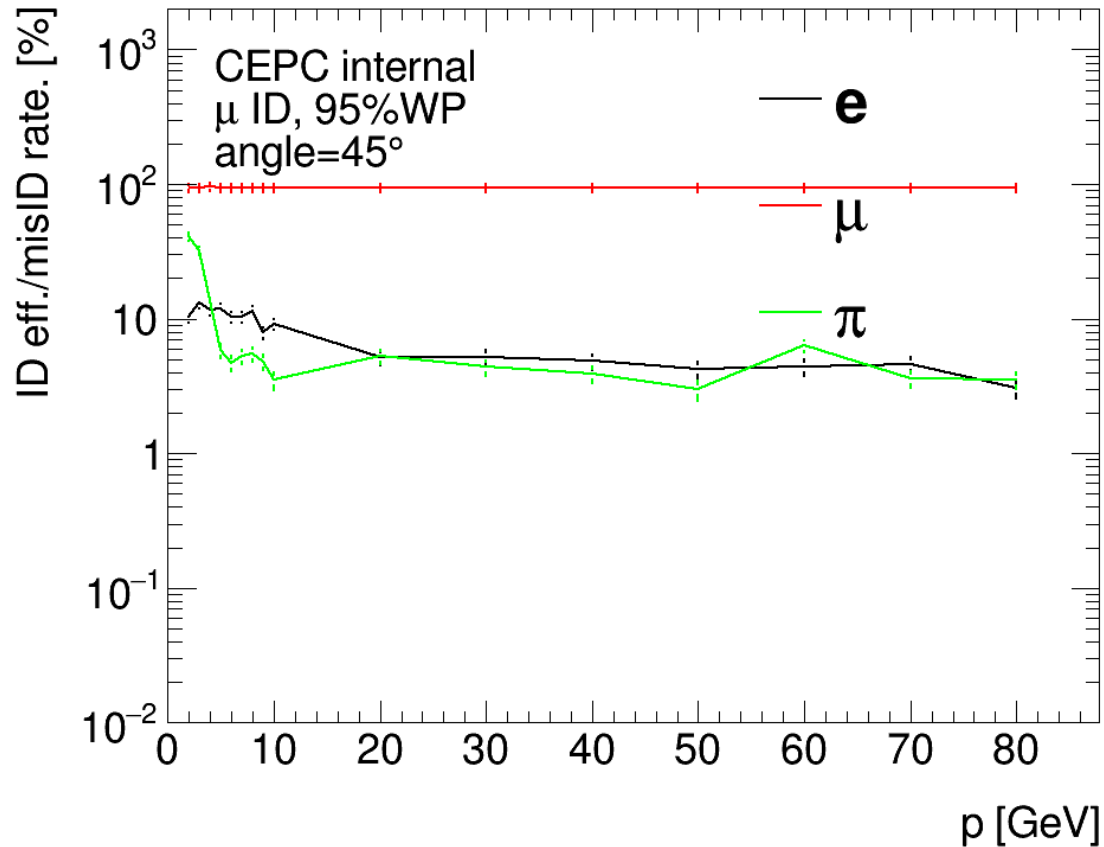
Performance examples (20°)

Without(left) vs with MindR(right)



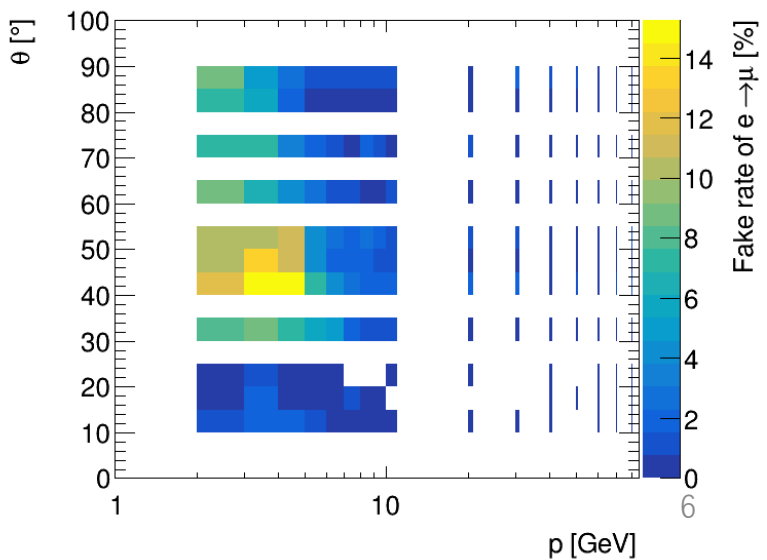
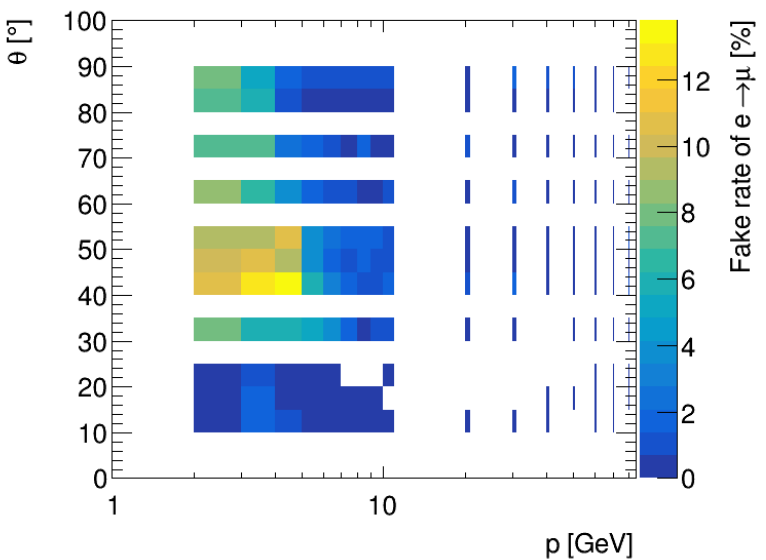
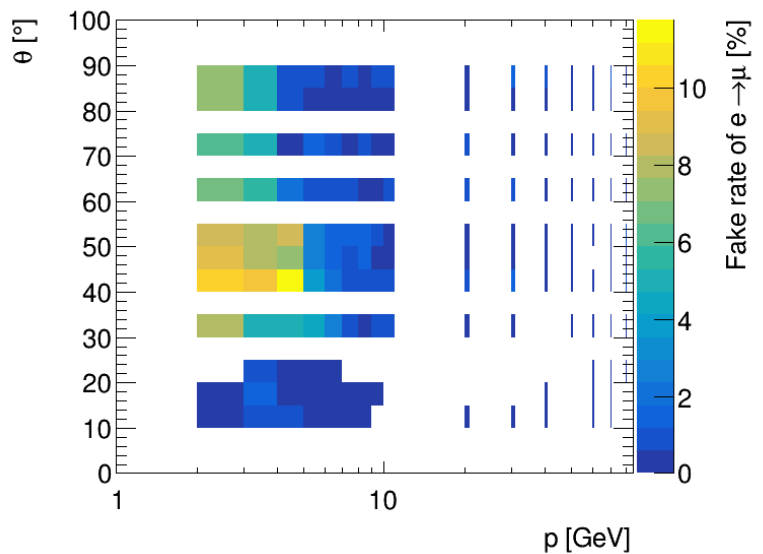
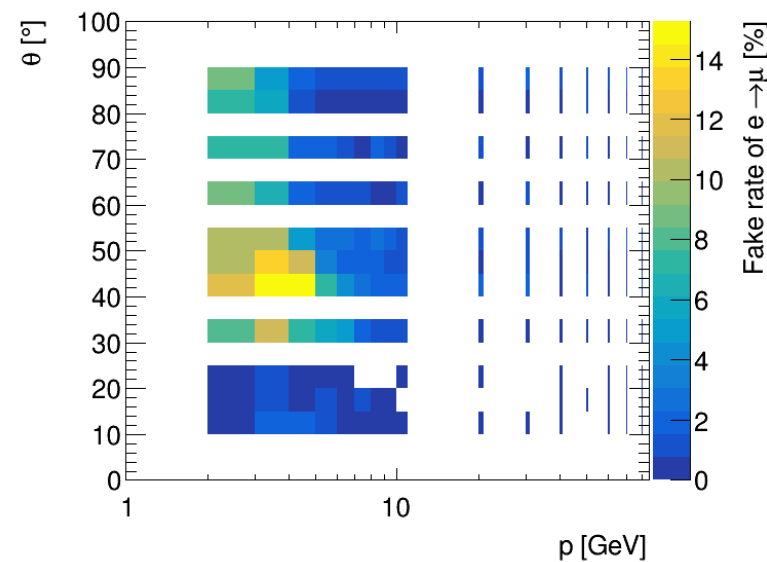
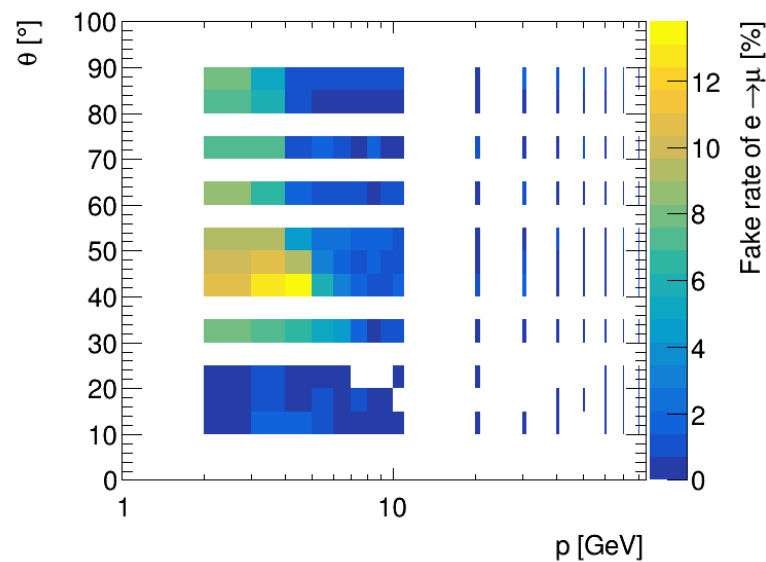
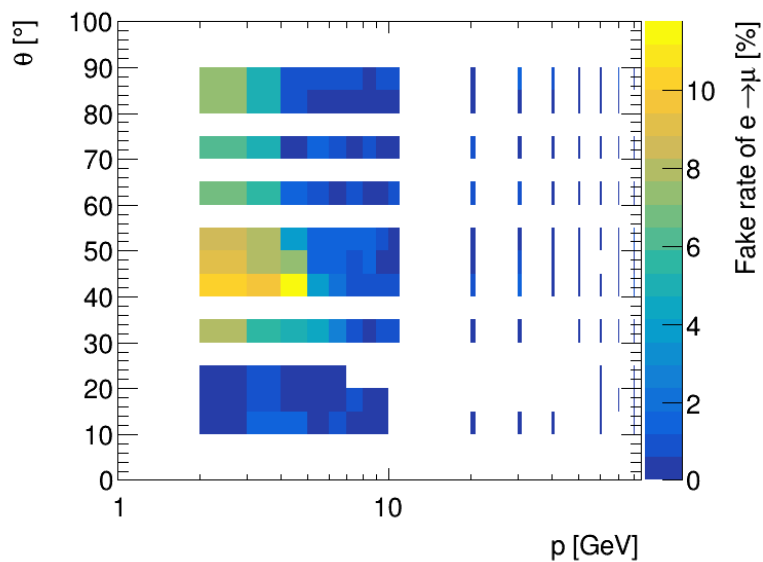
Performance examples (45°)

Without(left) vs with MindR(right)



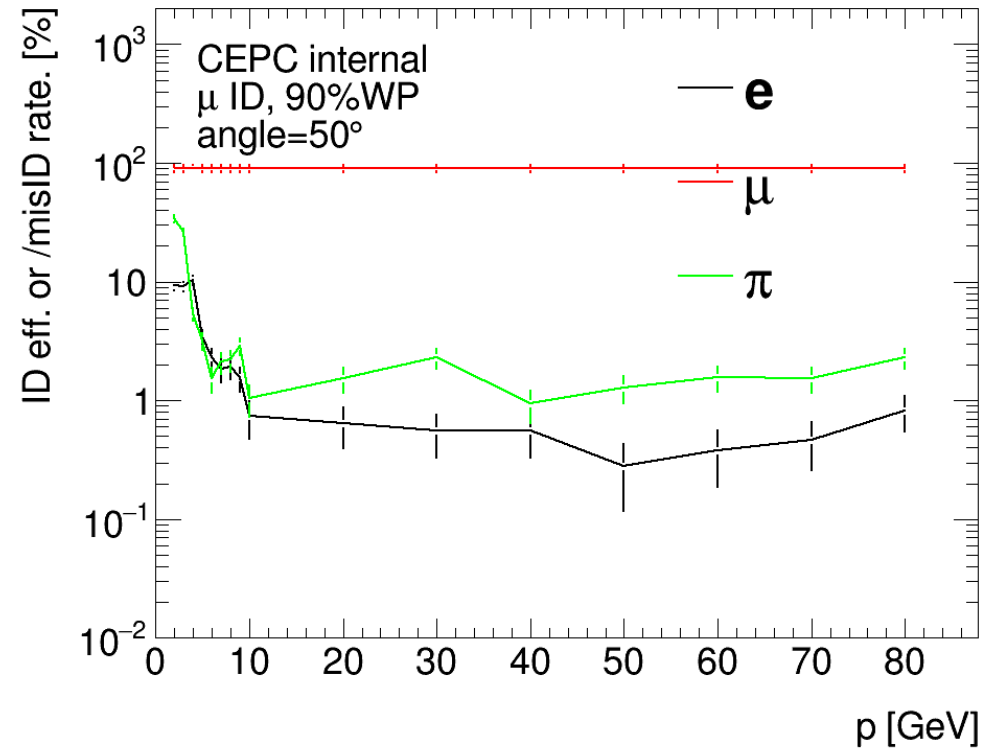
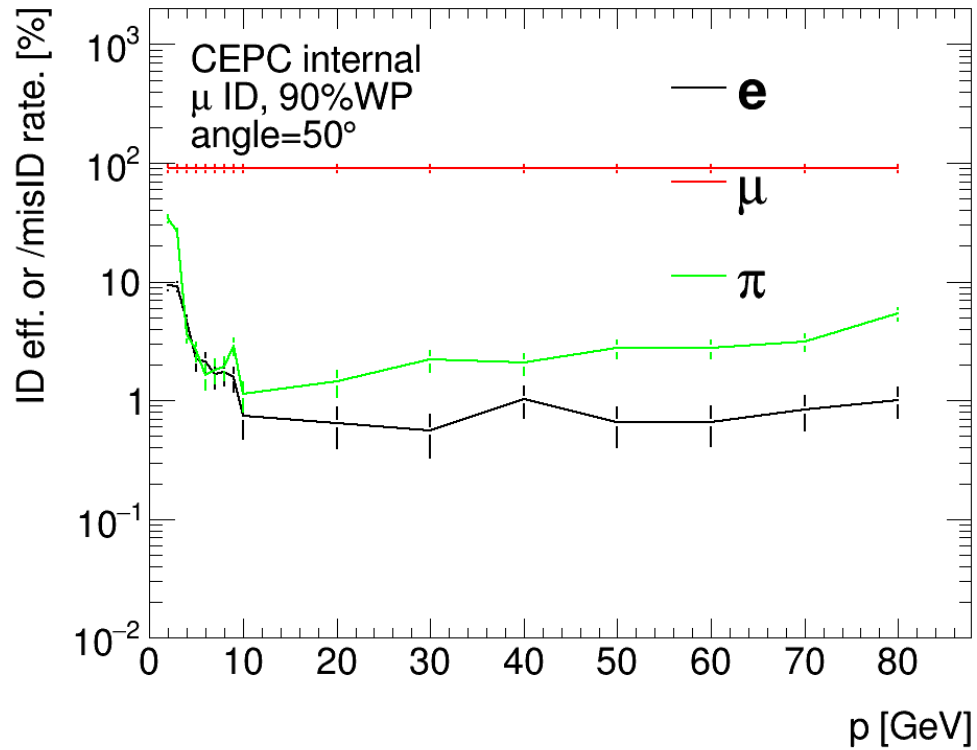
Use MindR(top) vs dd(bottom)

WP: 70%(left), 90%, 95%(right)



Performance examples

Use **MindR(left)** vs **dd(right)**



Summary

- 1) Adding MindR improves a lot at low momentum and low angle.
- 2) MindR and dd have similar ID efficiency.

- Work to do:
- 1) Try to use machine learning to combine all information.