HF jets analysis

04.11.2019   ALICE@IFJ meeting

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Outline

1. What was done

2. Issues and questions

3. Plans for next week

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1. **What was done**

2. Issues and questions

3. Plans for next week

What was done

- run ML on the MC sample discussed last week
- Q&A:
  - How primary and seco. vertices are reconstruced?
  - How IP are reconstructed?
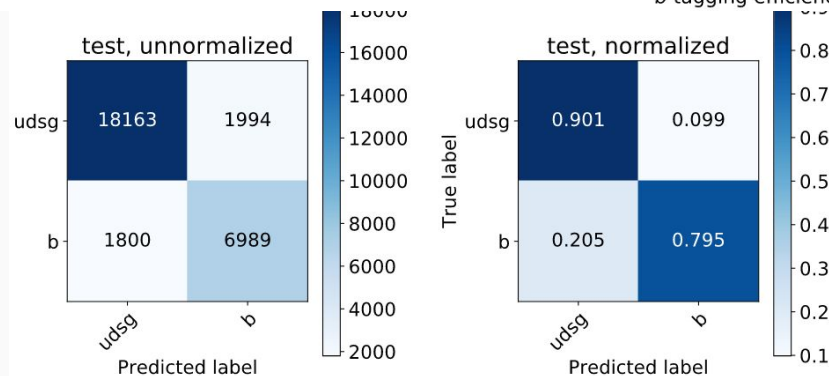 - How pyxsec.root is utilized?
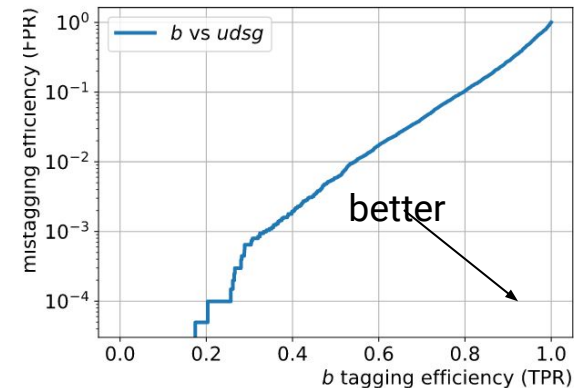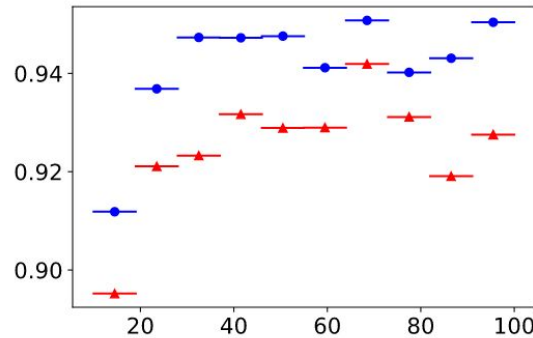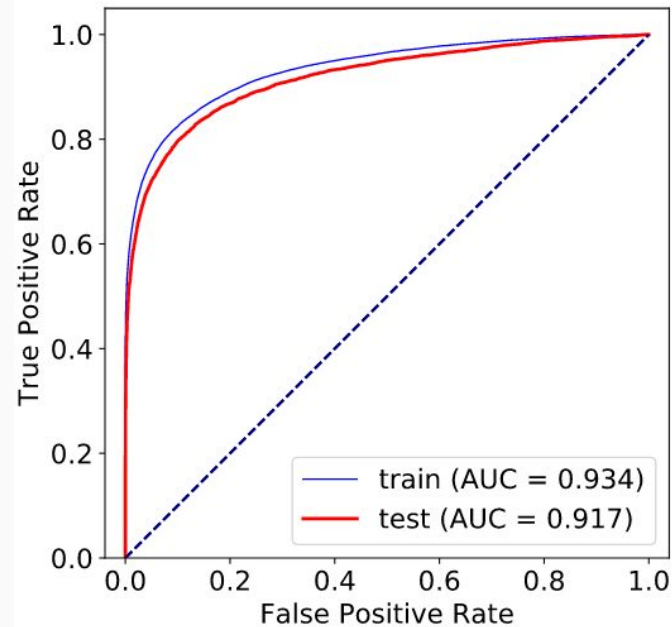
What was done - ML dataset

- simple dataset: 5 tracks + 5 sec. vertices
- only *b* vs *udsg*
- columns:

  Jet: Pt, Phi, Eta, Area, NumTracks, NumSecVertices

  track: IPd, IPz, CovIPd, CovIPz, Pt, Phi, Eta -- sorted by IPd_Nsigma

  SV: Lxy, SigmaLxy, Mass, Chi2, Dispersion -- sorted by Lxy_Nsigma

What was done - ML performance

Q&A

- How primary and seco. vertices are reconstruced?

  is prim vtx recalculated? No

- How IP are reconstructed?
  ```
  vtx = InputEvent->GetPrimaryVertex()     // or MCEvent->GetPrimaryVertex()
  AliAnalysisTaskJetExtractor->GetTrackIP(AliVVertex* vtx, AliAODTrack track, ...){
        track->PropagateToDCA(vtx, ...)
  }
  ```

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1. What was done

2. Issues and questions

3. **Plans for next week**

Plans for next week

1. get data from LHC15n and compare to MC
2. study possibility to find SV among all tracks associated to jet, not just 3 tracks (check semileptonic decays of *b*, did they recalculate PV?)
3. alternative to above: merging multiple 3-track SVs into one (it would be good to have SV_x/y/z uncertainies)
4. plot SV_x/y/z and Lxy as a function of pT