



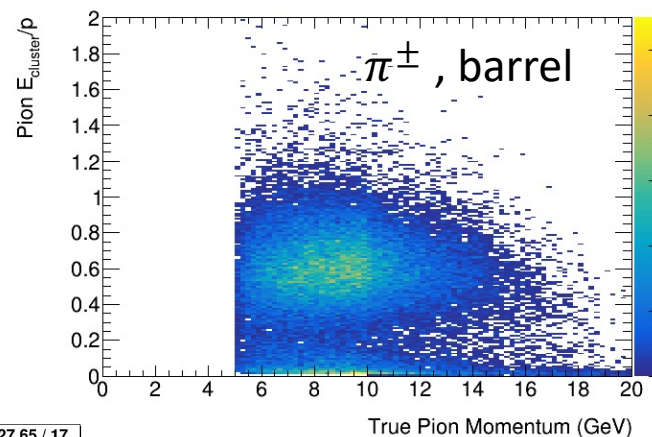
# HF & Jets Update

Cheuk-Ping Wong & Wangmei Zha

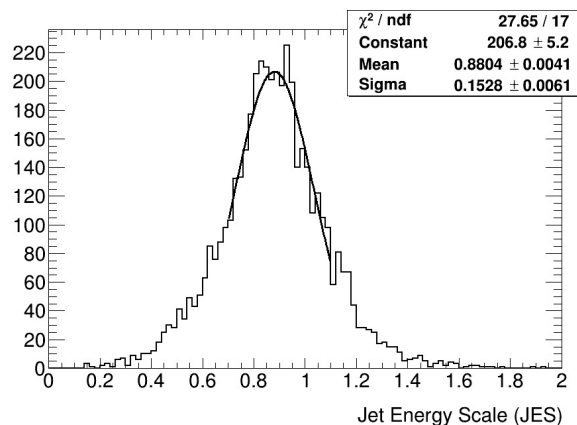
10-19-2021

# Centauro Jet Energy Scale

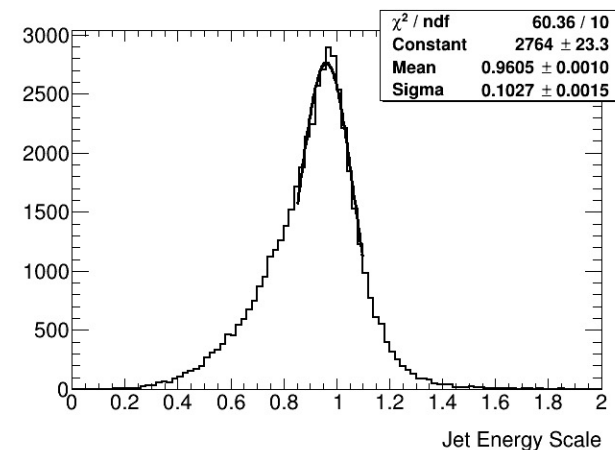
## Calo track evaluation



<https://indico.bnl.gov/event/13149/contributions/56038/attachments/37737/62151/Centauro%20Jets%20Update.pptx>



scale



- Similar scaling for neutral jet constituents
- Look for neutral components by combining clusters w/o matching tracks from different calorimeter
- Issue: double peak structure of JES in forward region

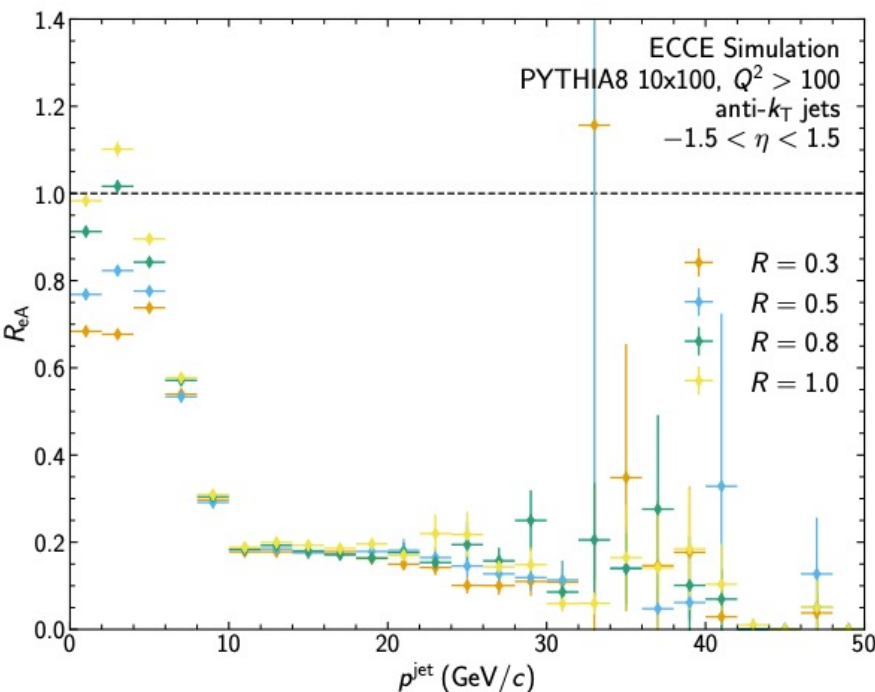


# Reco. Calo. Jet $R_{eA}$

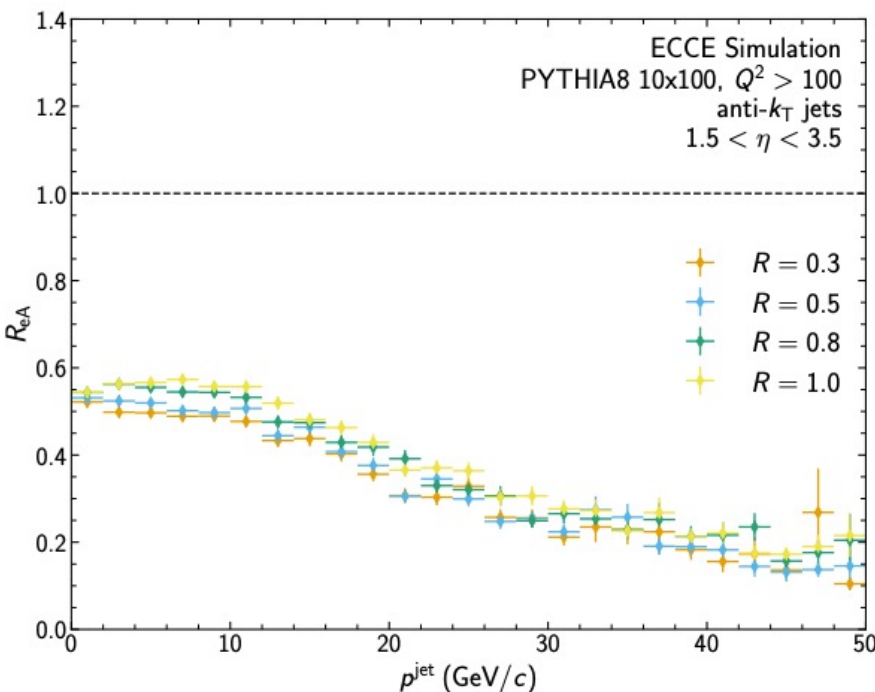
- 2<sup>nd</sup> production results
- nPDF weighting for eAu

$$R_{eA} = \frac{1}{A} \frac{\int_{\eta_1}^{\eta_2} d\sigma/d\eta dp|_{eA}}{\int_{\eta_1}^{\eta_2} d\sigma/d\eta dp|_{ep}}$$

Barrel



Forward

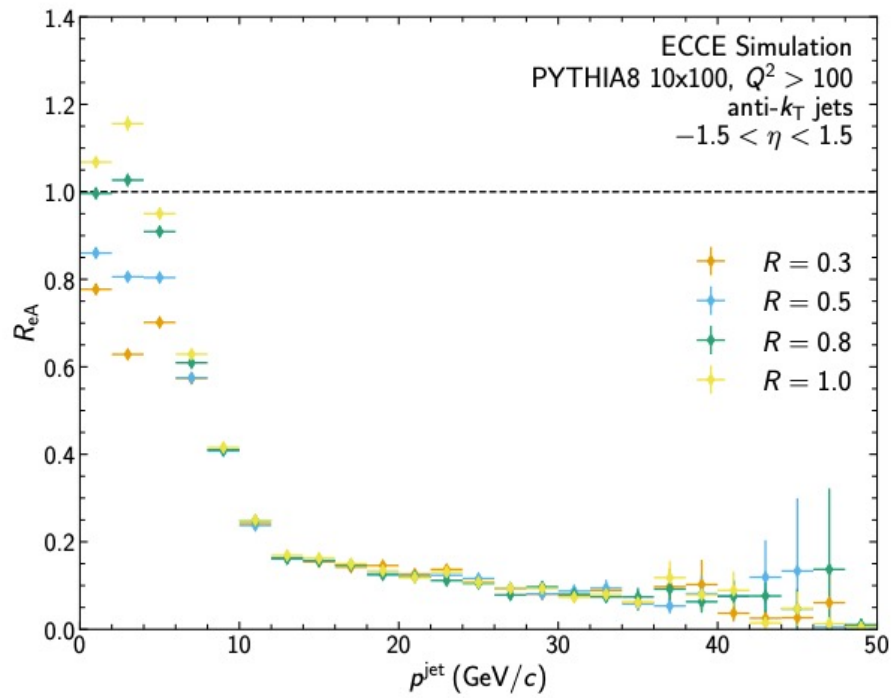


[https://indico.bnl.gov/event/13149/contributions/56039/attachments/37740/62155/2021-10-15.rehlers.ECCE\\_HF%2BJet\\_ReA.v1.pdf](https://indico.bnl.gov/event/13149/contributions/56039/attachments/37740/62155/2021-10-15.rehlers.ECCE_HF%2BJet_ReA.v1.pdf)

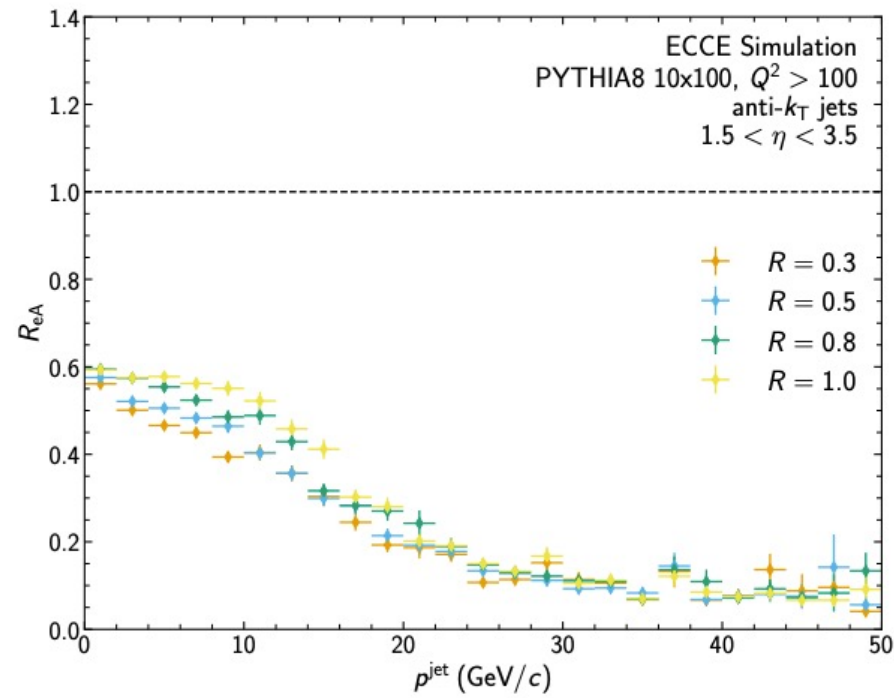


# Reco. Charged Jet $R_{eA}$

Barrel



Forward



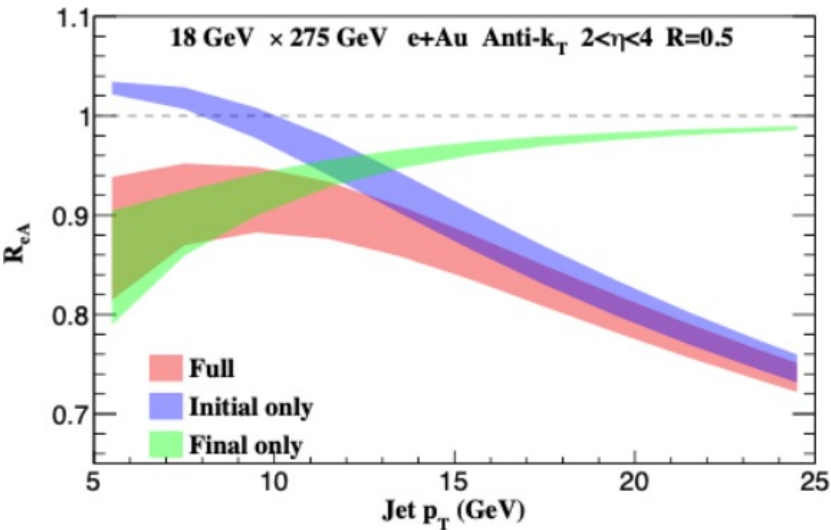
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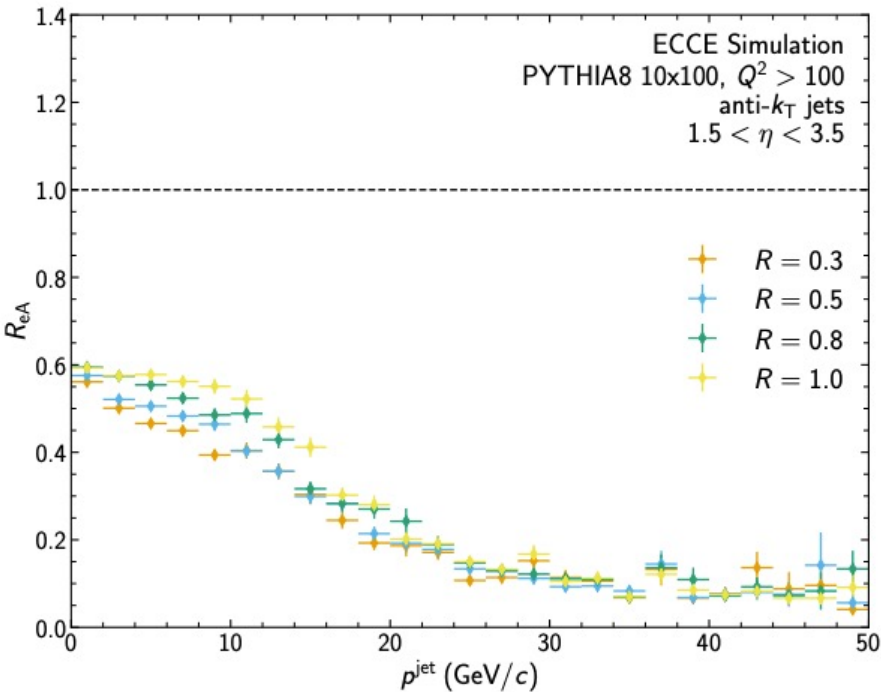
# Charged Jet $R_{eA}$

Similar shape, but the scale is smaller

## Yellow report



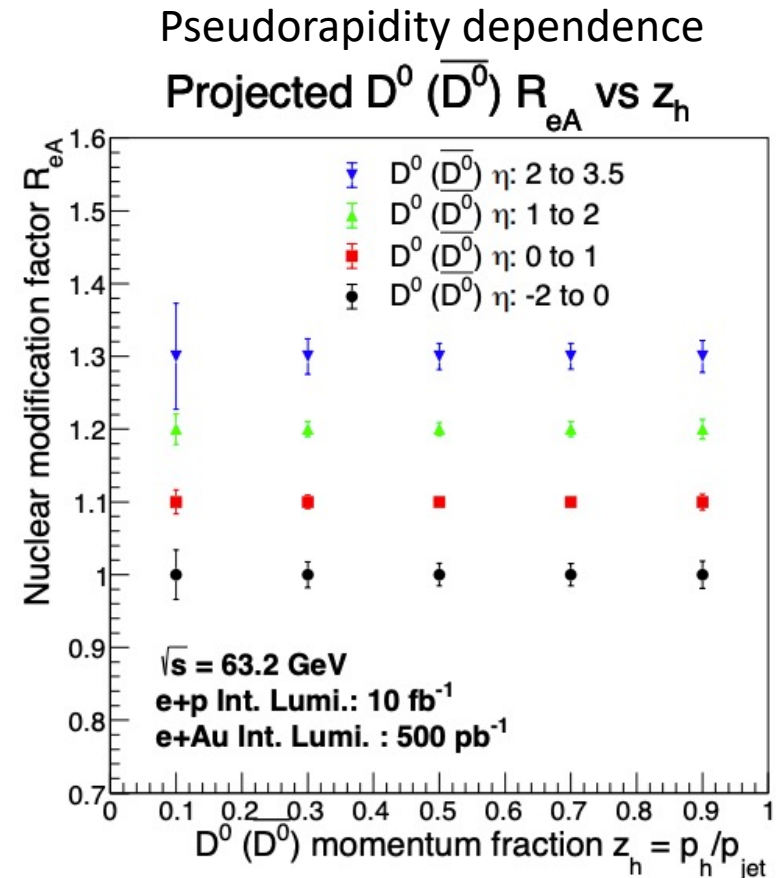
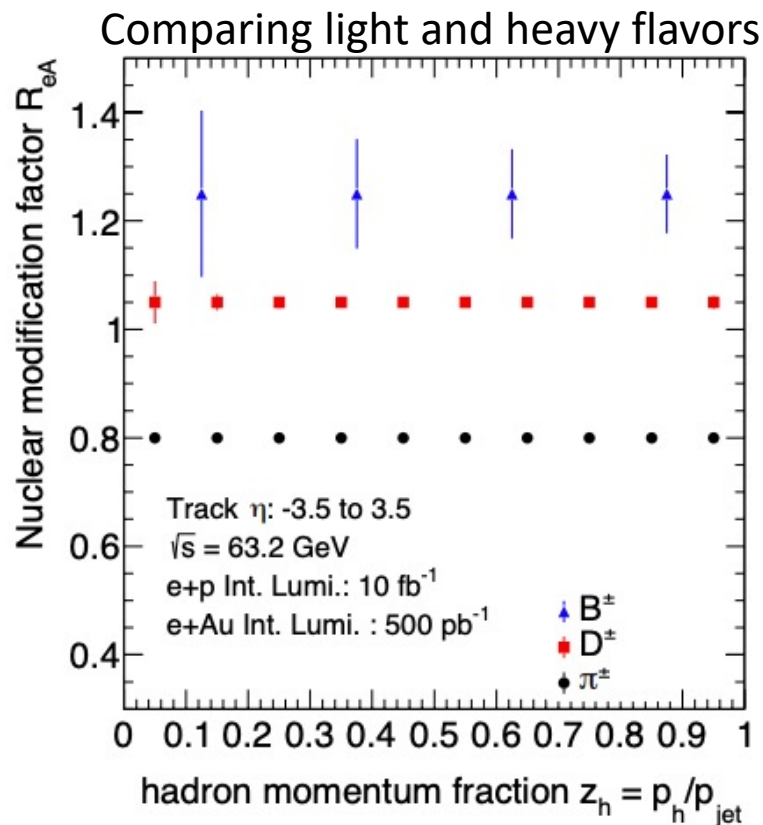
## Forward



[https://indico.bnl.gov/event/13149/contributions/56039/attachments/37740/62155/2021-10-15.rehlers.ECCE\\_HF%2BJet\\_ReA.v1.pdf](https://indico.bnl.gov/event/13149/contributions/56039/attachments/37740/62155/2021-10-15.rehlers.ECCE_HF%2BJet_ReA.v1.pdf)



# Open HF $R_{eA}$



- Pythia 8 simulation with detector response (July concenpt)
- Plan:
  - Compare with theoretical calculation
  - Update plots with the latest detector design

[https://indico.bnl.gov/event/13138/contributions/56068/attachments/37779/62253/ECCE\\_JHF\\_updates\\_20211018\\_v1.pdf](https://indico.bnl.gov/event/13138/contributions/56068/attachments/37779/62253/ECCE_JHF_updates_20211018_v1.pdf)

