sPHENIX in Taiwan

Chia Ming, Kuo
National Central University, Taiwan
General situation in Taiwan

• the young generation of the HEP PIs in Taiwan has been looking for new experiments to work on
  • we had three forums to discuss the future plans
  • no conclusion yet; sPHENIX can be a good option
• Jennifer Hsu of NTHU may be interested to join sPHENIX
• Yi Yang of NCKU is in STAR
• Stathes Paganis and Rong-Shyang Lu of NTU show the interests to help the INTT assembly in TSiDF
NCU detector plan

• would like to contribute to INTT
  • sensor QA/….. (more details this afternoon)
  • silicon module assembly with NTU if possible (to be seriously discussed within the INTT community and the collaboration)
NCU object reconstruction plan

- I have involved in e/γ in CMS
  - in charge of e/γ identification group in 2014 and 2015
  - in charge of ECAL calibration and monitoring in 2016 and 2017
- We would like to involve in the photon reconstruction and identification once we have new manpower on board for sPHENIX
Isolate photon production at $\sqrt{s_{\text{NN}}} = 2.76$ TeV
PLB 710 (2012) 256
with MIT (Yen-Jie, Yongsun, …)

$\gamma$ and $\gamma+$-jets in pp at $\sqrt{s} = 13$ TeV
EPJC 79 (2019) 20
with Rong-Shyang Lu (NTU)

discuss with Itaru/RIKEN to see whether we have common interests on physics analysis in sPHENIX
Grid computing?

- it may not be very efficient for us to work on analysis with the computing resources at BNL
- NCU keeps maintaining ~2000 cores and ~1000TB for AMS/CMS/KAGRA
- Would like to transfer data/MC to NCU if possible
Summary

• We would like to attract more particle physicists in Taiwan to join sPHENIX

• NCU plans in sPHENIX
  • start from detector construction - INTT
  • contribute to $\gamma$ reconstruction/identification and physics analysis after we have more manpower