HE, Ting Yi

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Education

Chong Qing University, China **2021 - 2025**
B.S in Physics *3.38/4.00 GPA*

UC Berkeley, USA **2024 Aug - 2024 Dec**
BPIE

Research Experience

RELICS (Professor Ye, Jing Qiang) **March 2024 –**
Simulations intern *Remote*

- Programmed with GEANT4 to calculate the neutrino recoil via reactor and sensitivity of the detector to predict for the future detectors
- Programmed with Python to analyse the simulated data and optimize the fiducial volume cut of the background

NAOC (National Astronomical Observatory of China) **June 2023 –**
intern for Blinkverse *Remote*

- Collecting data from references and writing them into JSON to build the platform for FRB researchers

Chong Qing University (Professor Yang, Xiao Hong) **June 2022 –**
Simulations and experiments *Self-motivated projects*

- Obtained comprehensive understanding of Fluid dynamics, MHD and accretion disks
- Conducted experiments to make air vortex rings to testify the Rayleigh-Taylor instability
- Programmed with PLUTO in Linux to reproduce Stone's work(Stone et al. MNRAS, 199, 310, 1002) of 2D simulation of black hole accretion flows
- Research Qualitatively on Magnetically driven winds' mass flux properties through simulations, taking breakthrough of time domain obstacle.

SRTP (College student scientific research training program) **Nov 2021 – March 2023**
Simulations with COMSOL *Project Leader*

- Obtained great command of COMSOL simulations in electric field in frequency domain
- Conducted the project aiming to construct a noise reduction structure with electrorheological fluid controlled by electric field, leading 3 group members to complete it with COMSOL
- Arranged the timeline of the projects and present our outcome

Talent Projects (A platform for teenagers to gain research experience) **Jan 2019 – Dec 2019**
Analytic and Proposal *Project Leader*

- Under supervision, Proposed a design of hemispherical light sail independently to solve the complex operations when the light sail should be accelerated around the earth
- Evaluated the advantages and disadvantages of the hemispherical light sail and rectangular light sail and Simulated the process of unfolding of the hemispherical light sail using Adams
- Through oral defence, which impressed Academician Wu, Xiang Ping and Professor Zhou, Xiao Yuan, Awarded as Outstanding Student of the Year

Publications

In situ thermal characterisation and filamentary modification in Polymethylpentene

- Infrared Physics & Technology Beining Liu, Xingzhu Wang, Juan Ahuir Torres, Tingyi He, Hongjun Zhou, Hong Zhao, Chong Zeng, Li Ma, Xihao Chen, Guangyu Zhu

RELICSa REactor neutrino LIquid xenon Coherent elastic Scattering experiment

- eprint arXiv:2405.05554 10.48550/arXiv.2405.05554

Technical Skills

Languages: Python, C
Tools:Linux,Matlab, Origin, PLUTO, COMSOLVScode, GEANT4
Reading Tools: Zotero&Obsidian

Honours and Awards

Comprehensive scholarship for outstanding students for three consecutive years **2021-2023**

- Got selected being in top **7% out of 138** students in the College of Physics in ChongQing University

Science and Technology Academic Innovation Advanced Individual **Nov 2022**

- Got selected out of **169 students from the Department Of Physics** who applied in Chong Qing University

The 7th Southwest College Student Physics Academic Competition **June 2023**

∗ Secondary Prize

The 6th Chongqing College Student Physics Innovative Competition **Dec 2023**

· Secondary Prize