

Yaoqi Cao 曹尧齐

EDUCATION

- **University of Warwick** Coventry, UK
PhD student supervised by Dr.Xianguo Lu, Particle Physics *Oct 2023 – Present*
Focus on: Atmospheric neutrino oscillation, Neutrino mass hierarchy, GeV neutrino interaction
- **University of Manchester** Manchester, UK
Master of Philosophy supervised by Prof.Justin Evans, Particle Physics *Jan 2022 – Sep 2023*
Thesis: Searching for new physics with MicroBooNE and development of next-generation neutrino detector
- **Lanzhou University** Lanzhou, China
Bachelor of Science supervised by Prof.Ke Han (SJTU), Applied Physics *Sep 2016 – Jun 2020*
Thesis: Sensitivity Analysis of $0\nu\beta\beta$ experiment base on Xeon-136

EXPERIENCE

- **DUNE collaboration** Manchester, UK
Thesis Student *Jan 2022 – 2023*
 - **Tension Related Algorithm:** Took part in modifying the algorithm about the process and finding tension resonance peak in wire scan data
- **MicroBooNE collaboration** Manchester, UK
Thesis Student *Aug 2022 – 2023*
 - **Background Analysis:** Generated and processed neutrino MC samples from MicroBooNE, and analyze the dominant background channel
 - **Systematic Uncertainties:** Studied the systematic uncertainties in sub-GeV dark matter search (detector/neutrino flux/...) by re-generate with different variables or re-weight MC samples
 - **Limit Setting:** Used the new total uncertainty to update the sensitivity to the sub-GeV dark matter search in MicroBooNE
- **PandaX III group** Shanghai, China
Research Assistant *Sep 2020 – Aug 2021*
 - **TPC Performance Test:** According to a series of measurement the gain factor in different filled work gas to study the performance of a prototype TPC
 - **Xeon Absorption Test of Steel Container:** Took part in the design and set up an experiment platform to test the absorption of Xeon in a steel container
- **JUNO collaboration** Beijing, China
Undergrad Research Project *Jul 2018 – Aug 2019*
 - **Liquid Scintillator Performance Test:** Completed a series of performance tests of liquid scintillator by a PMT system built by myself

PROGRAMMING SKILLS

- **Languages:** Python, Matlab, C++, LaTeX