Po-Han, Chen

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Undergraduate physics student in National Taiwan University, being passionate about exoplanets, orbital dynamics, galaxy evolution, and cosmology. Experienced in large-scale sky surveys, data stacking, and statistical resampling methods. Researching statistical properties of low surface brightness objects recently.

Education

2023 – Present **B.Sc. Physics, National Taiwan University**

- GPA: 4.09/4.30
- Research Focus: Cosmology, Galaxy Evolution.
- Relevant Coursework: Diffuse Interstellar Medium, Radio Astronomy, Advanced Astronomical Observation, Star Formation, Introduction to Statistics, Data Structures and Algorithms.

Research Experience

2024 – Present **Undergraduate Student.** Academia Sinica, Institute of Astronomy and Astrophysics.

- Supervisor: Yi-Kuan Chiang (ASIAA).
- Developed Python-based pipeline for full-sky galaxy stacking using large survey data.
- Stacking through galaxy groups to measure the intra-halo light.

2024 – 2024 **Summer Student.** Academia Sinica, Institute of Astronomy and Astrophysics.
Revealing the Faint Universe: A Full-Sky Optical Map with TESS.

- Supervisor: Yi-Kuan Chiang (ASIAA).
- Contributed to mapping techniques for low surface brightness astronomy using TESS data.

2022 – 2023 **Independent Research.** Affiliated Senior High School of National Taiwan Normal University (HSNU) and National Taiwan University (NTU).
Understanding Orbital Resonance and Planetary Rings by Python Simulations.

- Understanding basic orbital resonance and transfer of angular momentum.
- Built up an strong base in Python coding.

Presentations

2025 **ASROC Annual Conference**
Poster: *A TESS Full-Sky Map for Low Surface Brightness Astronomy*.

Miscellaneous Experience

Awards and Certification

2021 — **International Astronomical Search Collaboration**. Contributed to asteroid observation and verification using Pan-STARRS data in collaboration with NASA and the Institute for Astronomy, University of Hawaii.

2016 – 2018 — **Taiwan National Chess Team**. Represented Taiwan in international tournaments; developed strategic thinking and problem-solving skills under competitive environments.

Outreach & Teaching Experience

2024 – Present — **Hoshiko Plan**. An astronomy education and scientific outreach program. Already visited Taoyuan (Taiwan), Kinmen (Taiwan), and planned trip to Koror (Palau).

2023 – Present — **Volunteer guide in Heritage Hall of Physics**. Volunteering in a museum in NTU that demonstrates the old Cockcroft-Walton accelerator.

2024 – 2025 — **Editor-in-Chief, AstroClub Journal 65th**. Led a team of writers and editors to produce the publication including articles and astrophotography galleries.

Teaching Division of the Astronomy Club. University club, organizing observations, teaching star-hopping and telescopes.

2022 – 2025 — **Astronomy Book Reading Group**. Speaker for responsible chapters of textbooks.

2021 – 2022 — **President of the Astronomy Club**. High-school club, organizing observations, teaching star-hopping and telescopes.

Skills

Languages — Distinguished reading, writing and speaking competencies for English. Mandarin Chinese native speaker. Basic abilities in German.

Coding — Python, C, C++.

Data Analysis — Statistical resampling, large-scale data stacking, sky mapping.

Databases — SQL.

Web Dev — HTML, CSS, JavaScript.

Additional — Academic research, computer cluster, Git, LaTeX typesetting.