(+86) 178-7000-9780
wukoutian@mail.ustc.edu.cn

Koutian Wu

frank-koutianwu.github.io
home.ustc.edu.cn/~wukoutian

Educational Background

Zhao Jiuzhang Talent Program in Earth and Space Sciences, USTC (B.S.) Sep 2020 – Expected in Jul 2024
Track of Space Physics, Major of Space Sciences and Technologies

- Overall GPA: 3.46/4.30 (85.28/100)
- **Selected Scholarship:**
  - Zhao Jiuzhang Scholarship in Earth and Space Sciences (∼ 5%) 2022
  - Outstanding Student Scholarship of USTC (∼ 15%) 2022
  - Scholarship for Talent Program in Basic Disciplines of USTC (∼ 30%, three times) 2020 - 2022
- **Course Experience:** help to edit the handout of **Plasma Physics** Course
  - Lecturer: Prof. Yi Li (USTC); Collaborator: Xiaohang Xu Fall 2022

Publications

K. T. Wu, W. Yi, and X. H. Xue. 2023. Diurnal and seasonal variations of meteor velocity at the middle latitude using the Mengcheng meteor radar. (in prep).

Selected Research Experience

Research Interests: Physics of Middle and Upper Atmosphere, Space Weather, Solar Physics

Meteor shower velocity estimates from the Mengcheng meteor radar **Apr 2022 - Now**
Advisors: Prof. Xianghui Xue (USTC) and A.P. Wen Yi (USTC) Hefei, Anhui, China

- Discussed the Diurnal and annual variations of meteor numbers, meteor speed, and meteor altitude using the Mengcheng meteor radar data from 2014 to 2022 with the method of Gaussian distribution.
- Explained the spatial and temporal distribution of meteors on equinox days, solstice days, aphelion, and perihelion using the most updated Mengcheng meteor radar data of 2022.
- Assessed: Part of the results of this study received an A (91/100) in the General Astronomy Course (lectured by Prof. Chenglong Shen) and received an A (90/100) in Space Environment Course (lectured by Prof. Jingnan Guo).

Study the evolution of CME using in-situ observations near the Earth and Mars **Dec 2022 - Now**
Advisor: Prof. Chenglong Shen (USTC); Collaborator: Jinshu Cai (USTC) Hefei, Anhui, China

- Uses the observation of CME internal structure at different distances presented by the planetary exploration program to study the evolution of coronal mass ejection internal structural characteristics.

Integrated practice of space physics and space detection (a Course in USTC) **Jul 2022**
Advisors: Prof. Jiuhou Lei et. al; Collaborators: Han Yue, Tianwen Hu, and Lantian Xue Hefei, Anhui, China

- Grasped the basic working principle of instruments such as temperature-detecting LiDAR and magnetometer.
- Analyzed solar-terrestrial observational data from satellite projects and remote sensing instruments.
- Assessed: I was the **leader** of Group 8, which received the **first prize** in the final presentation. I received an **A+ (96/100)** in the course.

Construction of dynamic heat dissipation structure **Jul 2021 - Aug 2021**
Advisors: Prof. Quanshui Zheng (Tsinghua University, X-Institute), Prof. Jun Yang (UESTC) and A.P. Qiuquan Guo; Collaborators: Yihao Yang (USTC) and Yuchen Li (SJTU) Shenzhen, Guangdong, China

- Designed a simple 4*4 dynamic motion structure model, whose heat dissipation ability is better than that of the static structure. This model expands the application scenario of dynamic heat dissipation structure.
- Attended an interdisciplinary poster session at X-Institute, showing our work to experts from different trajectories such as biology, information, and mechanics.
- Assessed: We received **Best imagination Award**. I and Yihao Yang were elected as X-Institute Student Fellows.

Seminar of Electromagnetic Wave Environment National Field Scientific Observation Station **Aug 2022**
Advisor: Prof. Xianghui Xue (USTC) and A.P. Wen Yi (USTC) Kunming, Yunnan, China

- I was the **only undergraduate** student invited to the seminar.
- Visited meteor radar, incoherent scattering radar, MST radar, MF radar, and so on.
- The principle of middle and upper atmosphere remote sensing is discussed.

Selected Honors and Awards

- The first batch of X-Institute C2 Creative Talents (10/422) 2022
- USTC Essay Writing Competition of Electromagnetics, 1st Prize 2022
- USTC Essay Writing Competition of Optics, 2nd Prize 2022
- The first batch of X-Institute Student Fellows 2021

Skills and Languages

- **Programming & Software** MATLAB, LaTeX, C/C++, Python, Markdown, HTML, Origin, Mathematica

Selected Leadership Experience

- USTC Student Society of Planetary Science, vice President 2022 - Now
- USTC Online Academy of Training Plan for Top Students in Basic Disciplines, Student Administrator 2021 - Now
- USTC Student Xing Yun Poetry Club, Founding President (the youngest of all club presidents) 2021 - 2022