Xiangyu Zhang

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RESEARCH INTERESTS

Interstellar medium (847) | Interstellar dust extinction (837)
Polycyclic aromatic hydrocarbons (1280)

EDUCATION

Graduate student October 2021-July 2025 (expected)
Max Planck Institute for Astronomy (MPIA), Heidelberg
Supervisor: Dr. Gregory M. Green

Bachelor's degree for natural science August 2017-June 2021
Department of physics, Tsinghua University (THU), Beijing
Selected awards: Lin-bridge scholarship (highest distinction for astronomy undergrads)

OUTREACH AND SERVICE

Referee for MNRAS (Since 2023)
Member of the **Local Organizing Committee** for the conference:
New Computational Methods in Milky Way Dynamics and Structure
Ringberg Castle, Bavaria, July, 2024

TEACHING EXPERIENCE

Teaching Assistant, Introduction to astronomy @ Universität Heidelberg, 2023 Spring.
Teaching Assistant, Introduction to astronomy @ Universität Heidelberg, 2023 Fall.

LIST OF PUBLICATIONS

(See NASA ADS for more contributed work)

Zhang, X., Hensley, B., & Green, G., (2024, in press) Dust extinction-curve variation in the translucent interstellar medium is driven by PAHs. accepted by ApJL. arXiv:2410.23171

Green, G., **Zhang, X.**, & Zhang, R. , (2024) The Dust Extinction Curve: Beyond R(V). submitted. arXiv:2410.22537

Zhang, X. & Green, G., (2024) Unveiling the Milky Way dust extinction curve in 3D. under review at **Science**, recommended for publication by referees. Zenodo | arXiv: 2407.14594

Zhang, X., Green, G., & Rix. H.-W. (2023) Parameters of 220 million stars from Gaia BP/RP spectra. Monthly Notices of the Royal Astronomical Society 524, no. 2 (2023): 1855-1884.

Zhang, X., et al. (2020). OGLE-2015-BLG-1771Lb: A Microlens Planet Orbiting an Ultracool Dwarf?" The Astronomical Journal, 159(3), 116.

Yang, H., **Zhang, X.**, et al. (2020). KMT-2016-BLG-1836Lb: A Super-Jovian Planet from a High-cadence Microlensing Field. The Astronomical Journal, 159(3), 98.

DATASETS PUBLISHED

"XPPARAMS" – Parameters of 220 million stars from Gaia BP/RP spectra, available on zenodo and GAVO

"R(V) in 3D" – Precise determination of extinction R(V) for over 130 million stars, available on zenodo.

CONFERENCE PRESENTATIONS & SEMINAR

Variation of extrinction curces from PS1, 2MASS, WISE & Gaia | Interstellar Institute, July 2022
@ Institut Pascal, Saclay, Paris, France

Stellar parameters from Gaia XP spectra using a forward model | Gaia XPloration, May 2023
@ IoA, Cambridge

A 3D Rv map based on Gaia XP spectra | August 2023
@ DoA, Tsinghua University, Beijing

Inferred stellar parameters from 220 million XP spectra using an empirical forward model | Seminar, August 2023
@ NAOC, Beijing
@ KIAA, PKU, Beijing

R(V) variation in 3D and implication of dust evolution | Seminar, June 2024
@ Caltech, Pasadena
@ CfA, Cambridge, MA

Measuring extinction curve and its variation with a forward model, July 2024
@ Ringberg Castle, Bavaria.

LEADERSHIP

Vice president of Students' Union (2019-2021)
Department of physics, Tsinghua University