

Ruizhi Zhan

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Education



Ph.D. in Atmospheric Sciences
Department of Atmospheric and Oceanic Sciences, School of Physics, Peking University

September 2022 - June 2027, *expected*
Beijing, China

• Advisor: Prof. Daniel D.B. Koll



Visiting Ph.D. Student
Institute of Astronomy, University of Cambridge

May 2026 - November 2026
Cambridge, United Kingdom



B.S. in Physics
School of Physics and Technology, Wuhan University

September 2018 - June 2022
Wuhan, Hubei province, China

• Cumulative GPA: 3.87/4.00, rank 2/27

Publications

Ruizhi Zhan and Daniel D.B. Koll. Reinterpreting the JWST Observations of 55 Cancri e with a Non-grey General Circulation Model, *in press*, arXiv:2606.12116

Ruizhi Zhan and Daniel D.B. Koll. Are Observationally Allowed Thin Atmospheres Stable on Hot Rocky Exoplanets?, *in prep.*

Ruizhi Zhan, Daniel D.B. Koll and Feng Ding. Novel Atmospheric Dynamics shape Inner Edge of Habitable Zone around White Dwarfs, *The Astrophysical Journal*, 971, 125, <https://iopscience.iop.org/article/10.3847/1538-4357/ad54c1>

Selected Awards

Cushman & Wakefield Scholarship
30 students per year

October 2024
Peking University

Outstanding Undergraduate Graduate
top 10%

June 2022
Wuhan University

National Scholarship
top 1%

November 2021
Wuhan University

First-class Scholarship of Wuhan University
top 5%

October 2021
Wuhan University

Talks & Presentations

Zhan R, D.D.B. Koll. Reinterpreting the JWST Observations of 55 Cancri e with a Non-Grey General Circulation Model.
Oral presentation

Rocky Worlds 4 conference

Groningen, Netherlands, 21 January 2026

Zhan R, D.D.B. Koll. Modeling the Atmosphere of 55 Cancri e with a Non-grey General Circulation Model.
Oral presentation

EGU 2025 conference

Vienna, Austria, 1 May 2025

Zhan R, D.D.B. Koll. Non-Grey Global Climate Model Reveals Atmospheric Heat Redistribution on Hot Rocky Exoplanets.
Oral presentation

AGU 2024 conference

Washington D.C., U.S., 10 Dec, 2024

Zhan R, D.D.B. Koll. Modeling the Atmosphere of 55 Cancri e with a Non-grey General Circulation Model.
Oral presentation

PhD Student Forum: Frontiers in Modern Astronomy

Beijing, China, 8 Dec, 2024

Zhan R, D.D.B. Koll and F. Ding. Novel Atmospheric Dynamics shape Inner Edge of Habitable Zone around White Dwarfs.
Oral presentation

2024 China Planetary Science Conference

Nanjing, China, 10 Oct, 2024

Zhan R, D.D.B. Koll and F. Ding. Novel Atmospheric Dynamics shape Inner Edge of Habitable Zone around White Dwarfs.
Poster presentation

Exoplanets & Planet Formation Workshop 2023

Beijing, China, 16 Dec, 2023

Zhan R, D.D.B. Koll. Novel Atmospheric Dynamics shape Inner Edge of Habitable Zone around White Dwarfs.

Poster presentation

Exoclimes VI conference

Exeter, U.K., 29 Jun 2023

Zhan R, D.D.B. Koll. The Habitable Zone Inner Edge Around White Dwarfs.

Poster presentation

AGU 2022 conference

online, 16 Dec 2022

Teaching

Teaching Assistant, Fundamental Planetary Science

Peking University

Fall 2023

Teaching Assistant, Fluid Dynamics

Peking University

Spring 2024

Competitive Observation Programs

(Co-I) *A Search for Life Around Two Dead Stars.*

James Webb Space Telescope (JWST) Cycle 4 Guest Observers Program 7564

Principal Investigator: Dr. Limbach, Mary Anne

Skills

Programming Python (Extensively) | LaTeX (Extensively) | shell | C++ | Fortran | Typst

Languages Mandarin Chinese (native) | English (Proficient)

Climate models ExoCAM | ExoRT | Exo-k | Isca | SOCRATES

Tools NASA-PSG

Service

Distinguished Lectures on Planetary Sciences “Atmospheric Dynamics of Giant Planets, Terrestrial Planets, and Earth”

Local Organising Committee (LOC) Member

Peking University

Aug 2023

Atmospheres, Climates, and Habitability of Mars and Other Planets

Local Organising Committee (LOC) Member

Peking University

Aug 2024

Atmosphere, Ocean, and Climate Dynamics of Earth and Other Planets

Local Organising Committee (LOC) Member

Peking University

Aug 2025