

XIHE LIU

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EDUCATION

SHANDONG UNIVERSITY | Undergrad in School of Physics, Class of 2025 (GPA Level : B)

09/2021 - Present

- Coursework – Math (Advanced Mathematics, Methods of Mathematical Physics, Probability and Mathematical Statistics, Linear Algebra, etc.), Physics (Thermal Physics, Optics, Theoretical Mechanics, Electrodynamics, Quantum mechanics, Computational Physics, etc.), Chemistry (College Chemistry, etc.)

RESEARCH INTEREST

Observation Radio Astronomy - ISM & Star Formation Using Continuum and Molecular Lines (ALMA, SMA)

Simulation The Magnetic Field of Star Formation Region

RESEARCH EXPERIENCE

DEPARTMENT OF ASTRONOMY, UNIVERSIDAD DE CHILE | Advisor: Prof. Guido Garay

03/2024 - Present

- Research Assistant, ALMA Three-millimeter Observations of Massive Star-forming Regions (ATOMS) - Hub-Filament Systems of ATOMS Sources 25, 63, 119 and 123

SHANGHAI ASTRONOMICAL OBSERVATORY, CHINESE ACADEMY OF SCIENCES | Advisor: Prof. Pakshing Li

11/2023 - 01/2024

- Research Assistant, A New Calibration Using Data from a Large-scale, High-resolution Simulation Using ORION2 on the Formation of Filamentary Dark Clouds

SHANGHAI ASTRONOMICAL OBSERVATORY, CHINESE ACADEMY OF SCIENCES | Advisor: Dr. Xing Lu

09/2022 - 09/2024

- Research Assistant, Analysis of Dense Cores and Filamentary Structures within the CMZ Cloud e Using ALMA Band 3 & 6

PUBLICATION

Liu, X.-H., Lu, X., Xu, F.-W., et al., “Dual-band Unified Exploration of Three CMZ clouds (DUET) – the 3 mm and 1.3 mm Continuum Emission and Dense Cores in the Dust Ridge cloud e” in prep., 2024,

SKILLS

Language Python (Astropy, APLpy, Matplotlib, Pandas, Spectral Cube), C, MATLAB

Software & Programming CASA, CARTA, DS9, VisIt, VS Code, Mathematica, ORION2

English CET4, CET6, ITLS

CONFERENCES AND PRESENTATIONS

ALMA-ATOMS/QUARKS WORKSHOP

08/2024

Oral Presentation (ALMA-ATOMS IRAS13484 source: Gas Inflow along HFSs and Outflows in Hub-Filament Systems)

Shanghai, China

244TH MEETING OF THE AMERICAN ASTRONOMICAL SOCIETY

06/2024

Poster (ALMA-ATOMS IRAS13484 source: Gas Inflow along HFSs and Outflows)

Madsion, WI, USA

SOKENDAI/NAOJ ASIAN WINTER SCHOOL 2024

02/2024

2023 ANNUAL SYMPOSIUM ON MOLECULAR CLOUDS AND STAR FORMATION

10/2023

Poster (DUET: The Band3 and Band6 Continuum Emission and Dense Cores in the Dust Ridge Cloud 'e')

Chongqing, China

2023 PEKING UNIVERSITY UNDERGRADUATE ASTRONOMY SYMPOSIUM

09/2023

Oral Presentation (Analysis of Dense Cores and Filamentary Structures within CMZ cloud 'e' using ALMA Band 3 & 6)

Beijing, China

2023 ANNUAL MEETING OF THE CHINESE ASTRONOMICAL SOCIETY

09/2023

Participate without Report

Weihai, China

2023 SUBMILLIMETER ARRAY INTERFEROMETRY SCHOOL

05/2023

SOFIA SCHOOL 2023

04/2023

THE 7TH CHINA SKA SUMMER SCHOOL

09/2022

HONORS AND AWARDS

Linbridge Scholarship 2023 Peking University Undergraduate Astronomy Symposium

First Prize Contemporary Undergraduate Mathematical Contest in Modeling

Third Prize Chinese undergraduate Astronomical Innovation Contest

COMMUNITY INVOLVEMENT

- 1** | *Lead of Chinese Undergrad Astrophysics Community* 2022 - Present
- Establish the First Chinese National Astronomical Academic Community (similar to Astrobites) Specifically Designed for Undergraduate Students
- 2** | *Astronomy Science Popularization Volunteer, Shandong University* 2021-2022
- Lead of Teaching Astronomy Popular Science Lesson to the Students of Primary School