

XIHE LIU

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EDUCATION

SHANDONG UNIVERSITY | *Undergrad in Department of Physics, Class of 2025 (GPA : Top 35%)*

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)

RESEARCH INTEREST

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

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 IRAS 13484, IRAS 16272, IRAS 18182 and IRAS 18264

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, CASSIS

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