

# XIHE LIU

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## EDUCATION

**SHANDONG UNIVERSITY** | Undergraduate in School of Physics (Graduation in 2025)

09/2021 - Present

- Coursework – Math (Advanced Mathematics, Methods of Mathematical Physics, etc.), Physics (Theoretical Mechanics, Electrodynamics, Quantum mechanics, etc.)

## RESEARCH INTEREST

**Observation** 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 Structures 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

## SKILLS

**Language** Python (Astropy, Astrodendro, Matplotlib, Pandas), C, MATLAB

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

**English** CET4, CET6, ITLS

## CONFERENCES AND PRESENTATIONS

**244TH MEETING OF THE AMERICAN ASTRONOMICAL SOCIETY**

06/2024

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

Madsion, WI, USA

**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