

# XIHE LIU

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## EDUCATION

**SHANDONG UNIVERSITY** | Undergraduate in School of Physics

09/2021 - Present

- Coursework – Advanced Mathematics, Methods of Mathematical Physics, Theoretical Mechanics, Electrodynamics, Quantum mechanics

## RESEARCH INTEREST

**Observation** ISM & Star formation (particularly within the Central Molecular Zone) using continuum and molecular lines

**Simulation** The magnetic field of Star formation region

## RESEARCH EXPERIENCE

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

09/2022 - 09/2023

- Analysis of Dense Cores and Filamentary Structures within the CMZ cloud e using ALMA Band 3 & 6

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

06/2023 - 12/2023

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

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

03/2024 - Present

- ALMA Three-millimeter Observations of Massive Star-forming regions (ATOMS) - Hub-Filament structures of ATOMS sources 25, 63, 119 and 123

## SKILLS

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

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

**English** CET4, CET6, ITLS, GRE Phys

## CONFERENCES AND PRESENTATIONS

**THE 7TH CHINA SKA SUMMER SCHOOL**

09/2022

**SOFIA SCHOOL 2023**

04/2023

**2023 SUBMILLIMETER ARRAY INTERFEROMETRY SCHOOL**

05/2023

**2023 ANNUAL MEETING OF THE CHINESE ASTRONOMICAL SOCIETY**

09/2023

*Participate without Report*

Weihai, China

**2023 PKU UNDERGRADUATE ASTRONOMY SYMPOSIUM**

09/2023

*Oral Presentation*

Beijing, China

**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

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

06/2024

*Oral Presentation*

Madsion, WI, USA

## HONORS AND AWARDS

**Third Prize** Chinese undergraduate Astronomical Innovation Contest

**Linbridge Scholarship** 2023 PKU Undergraduate Astronomy Symposium

**First Prize** Contemporary Undergraduate Mathematical Contest in Modeling

## COMMUNITY INVOLVEMENT

**1** | *Astro Science Popularization*

2021 - 2022

- Teach astronomy popular science lesson to the students of Hongjialou Primary School

**2** | *Astrophysics Party*

2022 - Present

- Establish the first national astronomical academic community in China (similar to Astrobites) specifically designed for undergraduate students