

Xiaoyi Ma

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EDUCATION

Peking University

PhD in Astronomy

Expected June 2028

Beijing, China

University of Victoria

Master of Science

June 2024

Victoria, Canada

University of Toronto

Honours Bachelor of Science with High Distinction

June 2021

Toronto, Canada

Astronomy & Physics Specialist, Physics Specialist, Mathematics Minor

PUBLICATIONS

First-author publications:

- *Vortex-induced rings and gaps within protoplanetary disks*, **Xiaoyi Ma**, Pinghui Huang, Cong Yu and Ruobing Dong, 2025, ApJ, 979 244 (<https://arxiv.org/abs/2412.11507>)
- *Identification of stellar-mass black hole binaries and the validity of linear orbital motion approximation in microlensing*, **Xiaoyi Ma**, Wei Zhu and Hongjing Yang, 2022, MNRAS, 513, 5088–5096 (<https://arxiv.org/abs/2111.11059>)

Other refereed publications:

- *The Atacama cosmology telescope: flux upper limits from a targeted search for extragalactic transients*, Carlos Hervías-Caimapo, Sigurd Naess, Adam D Hincks, Erminia Calabrese, Mark J Devlin, Jo Dunkley, Rolando Dünner, Patricio A Gallardo, Matt Hilton, Anna Y Q Ho, Kevin M Huffenberger, **Xiaoyi Ma**, Mathew S Madhavacheril, Michael D Niemack, John Orlowski-Scherer, Lyman A Page, Bruce Partridge, Roberto Puddu, Maria Salatino, Cristóbal Sifón, Suzanne T Staggs, Cristian Vargas, Eve M Vavagiakis, Edward J Wollack, 2024, MNRAS, 529, 3020–3034, (<https://doi.org/10.1093/mnras/stae583>)

APPROVED OBSERVING PI PROGRAMS

ALMA

2024.1.01458.S

Cycle 11

16.8 hour

VLA

VLA/24B-287

Semester 24B

28.32 hour

ALMA

2023.1.00108.S

Cycle 10

1.1 hour

ORAL PRESENTATIONS

2024 PKU International PhD Student Forum for Astrophysics

Testing Vortex Hypotheses in a Protoplanetary Disk

December 2024

Beijing, China

2024 National Planetary Science Conference

Testing Vortex Hypotheses in a Protoplanetary Disk

October 2024

Nanjing, China

Europlanet Science Congress 2024

Testing Vortex Hypotheses in a Protoplanetary Disk

September 2024

Berlin, Germany

East Asian ALMA Science Workshop 2024 <i>Testing Vortex Hypotheses in a Protoplanetary Disk</i>	July 2024 Siheung, South Korea
Emerging Researchers in Exoplanet Science Symposium (ERES) <i>Vortex-induced rings and gaps in a protoplanetary disk</i>	June 2023 New Haven, USA
Athena++ Workshop <i>Vortex-induced rings and gaps in a protoplanetary disk</i>	May 2023 New York, USA
Annual Atacama Cosmology Telescope Collaboration Meeting <i>AGN: Short-Term Variability of Bright Point Sources</i>	Oct 2022 Remote
Protoplanetary Disk and Planet Formation Summer School <i>Vortex Induced Rings and Gaps</i>	Aug 2022 Beijing, China
Chinese Astronomical Society Annual Meeting <i>Detecting Stellar-mass Black Hole Binaries via Gravitational Microlensing</i>	Dec 2021 Remote
Annual Atacama Cosmology Telescope Remote Meeting <i>Source and Transient: AGN Variability (with Dr. Adam Hincks)</i>	July 2021 Remote

POSTER PRESENTATION

Exoplanets & Planet Formation Workshop <i>Vortex-induced rings and gaps in a protoplanetary disk</i>	December 2023 Beijing, China
Canadian Astronomical Society (CASCA) Annual General Meeting <i>Vortex-induced rings and gaps in a protoplanetary disk</i>	June 2023 Penticton, Canada
Student Summer Research Program (SURP)(University of Toronto) <i>Finding Binary Black Holes with Gravitational Microlensing</i>	Aug 2020 Toronto, Canada

AWARDS

- 2024 Excellent Student Paper - 2024 National Planetary Science Conference
- 2024, 2023 Graduate Award (\$7,827) - University of Victoria
- 2023 Faculty of Graduate Studies (FGS) Travel Award (\$600) - University of Victoria
- 2023 Victoria Canada-China Friendship Association Scholarship (\$726) - University of Victoria
- 2023 The R. M. Petrie Memorial Fellowship (\$5,495) - Department of Physics & Astronomy, University of Victoria
- 2023 Albert Hung Chao Hong Scholarships (\$3,189) - University of Victoria
- 2023 Best poster from the Board - Canadian Astronomical Society (CASCA) Annual General Meeting
- 2021 College Sliver Medal - St.Michael's College, University of Toronto
- 2021, 2020, 2019, 2018 Dean's List Scholar - University of Toronto
- 2019 John J Sebisty Scholarship (\$1,500) - St. Michael's College, University of Toronto
- 2019 Vincent Wroblewski Memorial Bursary (\$1,500) - St.Michael's College, University of Toronto

ACTIVITIES

International Astronomy Day (Royal Astronomical Society of Canada) <i>Outreach Talk - Are we alone? Searching for Plants Beyond Our Solar System</i>	May 2023 Victoria, Canada
Annual Canadian Conference for Undergraduate Women in Physics (CCUWiP) <i>Delegate</i>	Jan 2021 Toronto, Canada
Annual Canadian Conference for Undergraduate Women in Physics (CCUWiP) <i>Delegate</i>	Jan 2020 Toronto, Canada

REFERENCES

Dr. Ruobing Dong – Research Supervisor

Kavli Institute for Astronomy and Astrophysics, Peking University

Email: rbdong@pku.edu.cn

Dr. Adam Hincks – Former Research Supervisor

Department of Astronomy and Astrophysics, University of Toronto

Email: adam.hincks@utoronto.ca

Dr. Wei Zhu – Former Research Supervisor

Department of Astronomy, Tsinghua University

Email: weizhu@mail.tsinghua.edu.cn