

CONTACT

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PROFESSIONAL APPOINTMENTS

Postdoctoral Fellow	KICP, University of Chicago, 2024 –
Graduate Research Assistant	Johns Hopkins University, 2020–2024
Research Assistant	Peking University, 2017–2018
Visiting Research Scholar	Univ. of Michigan, Ann Arbor, Fall 2016

RESEARCH INTERESTS

cosmic microwave background; cosmology; data analysis; statistics; high-performance computing

EDUCATION

Ph.D. Astrophysics. Johns Hopkins University. Advisor: Tobias A. Marriage	2018–2024
B.Sc. Physics. Peking University. Advisor: Joel N. Bregman	2013–2017

COLLABORATION

South Pole Telescope (SPT) Collaboration	2024 –
Cosmology Large Angular Scale Surveyor (CLASS) Collaboration	2018 –

REFERENCES

Tobias A. Marriage Professor marriage@jhu.edu 2018 –	Johns Hopkins Univ.
Charles L. Bennett Bloomberg Distinguished Prof. cbennett@jhu.edu 2018 –	Johns Hopkins Univ.
Adam D. Hincks Assistant Professor adam.hincks@utoronto.ca 2020 –	University of Toronto
Renxin Xu Professor r.x.xu@pku.edu.cn 2017 –	Peking University
Joel N. Bregman H.D. Curtis Prof. jbregman@umich.edu 2016 –	Univ. of Michigan, Ann Arbor

SELECTED AWARDS

KICP Postdoctoral Fellowship	University of Chicago, 2024
May-the-Fourth Scholarship	Peking University, 2016
CSC Visiting Fellowship	China Scholarship Council, 2016
Academic Excellence Award	Peking University, 2016
Social Work Award	Peking University, 2014
Mizuho Scholarship	The Affiliated High School of Peking University, 2013

TALK & PRESENTATION

<i>Quest for the large-scale CMB polarization</i>	KIAA Seminar, PKU, 2025
<i>Measurement of the Largest-scale E-mode polarization with CLASS</i>	KIPAC Seminar, SLAC, 2025
<i>Measurement of the Largest-scale E-mode polarization with CLASS</i>	Gravity Group Seminar, Princeton, 2025
<i>Polarimetry with the CLASS telescope</i>	KICP Chalk talk, Chicago, 2024
<i>Efficacy of the Variable-delay Polarization Modulator: Lessons Learned from CLASS</i>	CMB-S4 Summer Collaboration Meeting, UIUC, 2024
<i>Towards recovery of the largest-scale polarization with CLASS</i>	AAS 243 Dissertation Talk, New Orleans, 2024
<i>Accessing the largest-scale microwave polarization with CLASS</i>	Dicke Candidate Seminar, Princeton, 2023
<i>CLASS: Recent Progress and the 40 GHz Results</i> <small>invited</small>	FPD Seminar, SLAC, 2023

<i>CLASS: Recent Progress and the 40 GHz Results</i>	W&C Seminar, JHU, 2023
<i>CLASS: Recent Progress and the 40 GHz Results</i>	Cosmology Group, CCA, 2023
<i>Atmospheric Cloud Polarization</i>	Cosmo Group, Princeton, 2023
<i>Constraints on CMB Temperature evolution with SZ clusters</i>	W&C Seminar, JHU, 2020
<i>The properties of the Galactic hot gaseous halo from X-ray emission</i>	AAS 231, DC, 2018
<i>Is Calvera a strangeon star?</i>	AAS 231, DC, 2018
<i>The hot gaseous halo of the Milky Way including radiative transfer effects</i>	AAS 229, Grapevine, 2017

TEACHING

Introduction to Galaxies and Active Galactic Nuclei (TA, 171.314)	Johns Hopkins Univ., Spring, 2020
General Physics/Lab II (TA, 171.104)	Johns Hopkins Univ., Spring, 2019

OUTREACH

Johns Hopkins Physics Fair	Baltimore, MD, 2019
Introduction to Astronomy and Physics	Tangnan Second Middle School, Jiangxi, China, 2014

PUBLICATIONS

h-index: 9, citations: 343

AS MAIN AUTHOR

9. A Measurement of the Largest-Scale CMB E-mode Polarization with CLASS
arXiv 2501.11904 (2025) | YL & CLASS Collaboration
8. CLASS Angular Power Spectra and Map-component Analysis for 40 GHz Observations through 2022
ApJ 963, 92 (2024) | Eimer, Joseph R.; YL & CLASS Collaboration
7. CLASS Observations of Atmospheric Cloud Polarization at millimeter Wavelengths
ApJ 958, 154 (2023) | YL & CLASS Collaboration
6. CLASS Data Pipeline and Maps for 40 GHz Observations through 2022
ApJ 956, 77 (2023) | YL & CLASS Collaboration
5. Constraining Cosmic Microwave Background Temperature Evolution With Sunyaev-Zel'Dovich Galaxy Clusters from the Atacama Cosmology Telescope
ApJ 922, 136 (2021) | YL; Hincks, Adam D. & ACT Collaboration
4. Two-year Cosmology Large Angular Scale Surveyor (CLASS) Observations: 40 GHz Telescope Pointing, Beam Profile, Window Function, and Polarization Performance
ApJ 891, 134 (2020) | Xu, Zhilei; Brewer, Michael K.; Fluxá Rojas, Pedro; YL & CLASS Collaboration
3. Two-year Cosmology Large Angular Scale Surveyor (CLASS) Observations: A Measurement of Circular Polarization at 40 GHz
ApJ 889, 105 (2020) | Padilla, Ivan L.; Eimer, Joseph R.; YL & CLASS Collaboration
2. Calvera: A Low-mass Strangeon Star Torqued by Debris Disk?
ApJ 854, 165 (2018) | YL; Wang, Weiyang; Ge, Mingyu; Liu, Xiongwei; Tong, Hao & Xu, Renxin
1. The Properties of the Galactic Hot Gaseous Halo from X-Ray Emission
ApJ 849, 105 (2017) | YL & Bregman, Joel

AS CONTRIBUTING COAUTHOR

12. High-Efficiency and Low-Noise Detectors for the Upgraded CLASS 90 GHz Focal Plane
arXiv 2411.12705 (2024) | Núñez, Carolina & CLASS Collaboration
11. Sensitivity-improved Polarization Maps at 40 GHz with CLASS and WMAP Data
ApJ 971, 41 (2024) | Shi, Rui & CLASS Collaboration
10. HoverCal + PoloCalC: precise on-flight metrology performance results over CLASS telescope
SPIE 1310217 (2024) | Dünner, Rolando; Astori, Federico; Coppi, Gabriele; Eimer, Joseph; Errard, Josquin; Fluxá, Juan; YL; Mezzanzanica, Noemi; Nati, Federico; Petroff, Matthew; Puddu, Roberto; Rojas, Matías & Zannoni, Mario
9. Cosmology Large Angular Scale Surveyor (CLASS): 90 GHz Telescope Pointing, Beam Profile, Window Function, and Polarization Performance
ApJS 273, 26 (2024) | Datta, Rahul; Brewer, Michael K.; Denes Couto, Jullianna; Eimer, Joseph; YL & CLASS Collaboration

8. Microwave Observations of Venus with CLASS
PSJ 4, 154 (2023) | Dahal, Sumit & CLASS Collaboration
7. Testing Cosmic Microwave Background Anomalies in E-mode Polarization with Current and Future Data
ApJ 945, 79 (2023) | Shi, Rui & CLASS Collaboration
6. Calibration of Transition-edge Sensor (TES) Bolometer Arrays with Application to CLASS
ApJS 262, 52 (2022) | Appel, John W. & CLASS Collaboration
5. Four-year Cosmology Large Angular Scale Surveyor (CLASS) Observations: On-sky Receiver Performance at 40, 90, 150, and 220 GHz Frequency Bands
ApJ 926, 33 (2022) | Dahal, Sumit & CLASS Collaboration
4. Two Year Cosmology Large Angular Scale Surveyor (CLASS) Observations: Long Timescale Stability Achieved with a Front-end Variable-delay Polarization Modulator at 40 GHz
ApJ 922, 212 (2021) | Harrington, Kathleen & CLASS Collaboration
3. The optical/UV excess of X-ray-dim isolated neutron star II. Nonuniformity of plasma on a strangeon star surface
RAA 18, 082 (2018) | Wang, Wei-Yang; Feng, Yi; Lai, Xiao-Yu; YL; Lu, Ji-Guang; Chen, Xuelei & Xu, Ren-Xin
2. The Extended Distribution of Baryons around Galaxies
ApJ 862, 3 (2018) | Bregman, Joel N.; Anderson, Michael E.; Miller, Matthew J.; Hodges-Kluck, Edmund; Dai, Xinyu; Li, Jiang-Tao; YL & Qu, Zhijie
1. Merging strangeon stars
RAA 18, 024 (2018) | Lai, Xiao-Yu; Yu, Yun-Wei; Zhou, En-Ping; YL & Xu, Ren-Xin