

Stephanie H. Ho

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RESEARCH INTEREST

• The circumgalactic medium • Gas accretion and outflows • Galaxy formation and evolution • Quasar absorption-line • Coupling simulations and observations

EDUCATION

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| Ph.D. in Physics, with Astrophysics Emphasis <i>University of California, Santa Barbara</i> – Advisor: Prof. Crystal L. Martin – Thesis: How Do Galaxies Get Their Gas? | 2013 – 2019 |
| B.Sc. in Physics/Enrichment Stream in Theoretical Physics <i>The Chinese University of Hong Kong</i> | 2009 – 2013 |
| Reciprocity student of UC Education Abroad Program <i>University of California, Santa Barbara</i> | 2011 – 2012 |

POSITIONS HELD & ACADEMIC APPOINTMENTS

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| NSF Astronomy and Astrophysics Postdoctoral Fellow – Host Institution: New Mexico State University – Scientific Advisor: Prof. Christopher W. Churchill | 2022 – present |
| Postdoctoral Research Associate, Texas A&M University – Supervisor: Prof. Robert C. Kennicutt Jr. | 2019 – 2022 |
| Graduate Student Researcher, UC Santa Barbara | 2013 – 2019 |
| Teaching Assistant, UC Santa Barbara | 2013 – 2015, 2016 – 2017, 2019 |

GRANTS, HONORS, AND AWARDS

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| NSF Astronomy and Astrophysics Postdoctoral Fellowship | \$300,000 | 2022 – 2025 |
| NASA/STScI grant; HST Cycle 29 GO-16742, PI | \$106,945 | 2022 – 2025 |
| NASA/STScI grant; HST Cycle 27 GO-15866, PI | \$164,946 | 2020 – 2023 |
| Rodger Doxsey Travel Prize (Honorable Mention), 233 rd AAS Meeting, AAS | \$260 | 2019 |
| UC LEADS Program Fellowship (Mentoring), <i>UC Santa Barbara</i> | 2×\$1,500 | 2018, 2019 |
| Graduate Opportunity Fellowship, <i>UC Santa Barbara</i> | \$24,000 | 2017 – 2018 |
| Doctoral Student Travel Grant, <i>UC Santa Barbara</i> | \$1,350 | 2017 – 2018 |
| Graduate Research Mentorship Program Fellowship, <i>UC Santa Barbara</i> | \$24,000 | 2015 – 2016 |
| Travel Award for Excellence in Graduate Research, <i>American Physical Society</i> | \$500 | 2015 |
| Worster Summer Research Fellowship (Mentoring), <i>UC Santa Barbara</i> | 2×\$1,000 | 2014, 2016 |
| Outstanding Teaching Assistant Award, <i>UC Santa Barbara</i> | | 2014 – 2015 |
| Yzurdiaga Graduate Fellowship, <i>UC Santa Barbara</i> | \$7,000 | 2013 – 2014 |
| Herbert P. Broida Fellowship, <i>UC Santa Barbara</i> | \$3,000 | 2013 – 2014 |
| Yasumoto International Exchange Scholarship, <i>CUHK</i> | (\$3,000 HKD) \$385 | 2011 |

PUBLICATIONS

Total of 7 published peer reviewed journal articles; 5 (6) first (and second) author papers with 148 (211) citations, 274 total citations; h-index = 6 [retrieved from ADS; March 31, 2023]

7. **Ho, S. H.**, Martin, C. L. & Schaye, J., *How Identifying Circumgalactic Gas by Line-of-sight Velocity instead of the Location in 3D Space Affects O VI Measurements*. 2021, ApJ, 923, 137

6. **Ho, S. H.**, Martin, C. L. & Schaye, J., *Morphological and Rotation Structures of Circumgalactic Mg II Gas in the EAGLE Simulation and the Dependence on Galaxy Properties*. 2020, ApJ, 904, 76
5. **Ho, S. H.** & Martin, C. L., *Resolving 3D Disk Orientation Using High-resolution Images: New Constraints on Circumgalactic Gas Inflows*. 2020, ApJ, 888, 14
4. Martin, C. L., **Ho, S. H.**, Kacprzak, G. G. & Churchill, C. W., *Kinematics of Circumgalactic Gas: Feeding Galaxies and Feedback*. 2019, ApJ, 878, 84
3. **Ho, S. H.**, Martin, C. L. & Turner, M. L., *How Gas Accretion Feeds Galactic Disks*. 2019, ApJ, 875, 54
2. **Ho, S. H.**, Martin, C. L., Kacprzak, G. G. & Churchill, C. W., *Quasar Probing Galaxies: I. Signatures of Gas Accretion at Redshift $z \approx 0.2$* . 2017, ApJ, 835, 267
1. Kacprzak, G. G., Martin, C. L., Bouché, N., Churchill, C. W., Cooke, J., LeReun, A., Schroetter, I., **Ho, S. H.** & Klimek, E., *New Perspective on Galaxy Outflows from the First Detection of Both Intrinsic and Traverse Metal-line Absorption*. 2014, ApJL, 792, L12

APPROVED OBSERVING PROPOSALS

AS PRINCIPAL INVESTIGATOR

- Apache Point Observatory, KOSMOS, 2023Q1/Q2: NM03 5 half-nights
Resolving the 3D Orientation of Galactic Disks: New Constraints on Circumgalactic Gas Flow
- HST, WFC3, Cycle 29: HST-GO-16742 (Grant awarded: \$106,945) 17 orbits
Resolving the 3D Orientation of Galactic Disks: New Constraints on Circumgalactic Gas Flow
- VLA, 2020A: VLA/20A-400 36 hours
HI Observations of $z=0.2$ Galaxies with Corotating Circumgalactic Gas
- HST, COS, Cycle 27: HST-GO-15866 (Grant awarded: \$164,946) 25 orbits
Angular Momentum of the Warm-Hot Circumgalactic Medium
- Gemini Observatory, GMOS-N, 2015A: GN-2015A-Q-60 7.2 hours
Studying Galaxy Disk Structures and its Relation with Gas Accretion in $z=0.15-0.3$ Galaxies

AS CO-INVESTIGATOR

- MMT, Red Channel Spectrograph, 2021A; PI: Rob Kennicutt 1 night
- MMT, Red Channel Spectrograph, 2020A; PI: Rob Kennicutt 1 night
- HST, WFC3, Cycle 24: HST-GO-15754; PI: Crystal Martin 10 orbits
- Keck II, NIRC2/LGSAO, 2017A; PI: Crystal Martin 1 night
- Keck II, NIRC2/LGSAO, 2016B; PI: Crystal Martin 1 night
- Keck I, LRIS, 2015A; PI: Crystal Martin 2 nights
- Keck I, LRIS, 2014A; PI: Crystal Martin 2 nights

SEMINARS AND TALKS

(* invited presentations)

- * Ringberg Conference – The Multiphase Circumgalactic Medium, Ringberg Castle, Germany Feb 2023
- Oases in the Cosmic Desert: Understanding the Structure of the CGM, Tempe, AZ Feb 2023
- 241st Winter AAS Meeting, Seattle, WA Jan 2023
- * Cake Talk, The Cosmic Dawn Center (DAWN), Denmark *[online]* Nov 2022
- * Astronomy Colloquium, New Mexico State University, NM Sept 2022
- * Arthur M. Wolfe Symposium 2022, UC Santa Cruz, CA Mar 2022
- * Physics Colloquium, North Carolina State University, NC Feb 2022
- * CRAL Seminar, Centre de Recherche Astrophysique de Lyon, France *[COVID-19/online]* Apr 2021
- * Nuclear and Astronomy Seminar, Texas A&M University, TX *[COVID-19/online]* Dec 2020
- * Astronomy Lunch Talk, University of Washington, WA *[COVID-19/online]* Oct 2020
- * 2nd CGM@ND workshop, Dublin & Kylemore, Ireland *[COVID-19/postponed]* Aug 2020
- Galaxy Group Lunch Talk, Steward Observatory, AZ Feb 2020
- 7th Annual GMT Community Science Meeting, Carlsbad, CA Sept 2019
- * Astronomy Seminar, Texas A&M University/Mitchell Institute, TX Sept 2019
- Astro Lunch Talk, UC Santa Barbara, CA Apr 2019

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| 233 rd Winter AAS Meeting, Seattle, WA (<i>dissertation talk</i>) | Jan 2019 |
| * Lunch Seminar, Leiden Observatory, Netherlands | Nov 2018 |
| Astro Lunch Talk, UC Santa Barbara, CA | May 2018 |
| The Galaxy Ecosystem, ESO Garching, Germany | July 2017 |
| Astro Lunch Talk, UC Santa Barbara, CA | Apr 2017 |
| * Astro Pizza Lunch Talk, New Mexico State University, NM | Feb 2017 |
| Observational Evidence of Gas Accretion onto Galaxies Workshop, NRAO Headquarters, VA | Oct 2015 |
| Keck Science Meeting, UC Los Angeles, CA | Sept 2015 |

TEACHING AND MENTORING

UNDERGRADUATE STUDENTS MENTORED

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|---------------------------------------|---------------------------|
| Yuan Li, UCSB (SURF Fellow) | Summer 2021 – Winter 2022 |
| Adam Tedeschi, UCSB | Summer 2019 |
| Haley Bowden, UCSB (UC LEADS scholar) | 2018 – 2019 |
| Eric Miller, UCSB | Spring 2018 |
| Austen Trout, UCSB | Winter 2017 – Fall 2017 |
| Yi Guo, UCSB (Worster Fellow) | Summer 2016 – Winter 2017 |
| Anton Shvets, UCSB | Winter 2016 – Spring 2016 |
| Joseph Wong, UCSB (Worster Fellow) | Summer 2014 |

COURSES TAUGHT AS GUEST LECTURER

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| ASTR 600 Order-of-Magnitude Astrophysics, Texas A&M University | Fall 2020 (Nov) |
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COURSES TAUGHT AS TEACHING ASSISTANT

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| PHYS 1 Basic Physics, UCSB | Winter 2015/2017/2019 |
| PHYS 2 Basic Physics, UCSB | Spring 2017 |
| ASTRO 1 Basic Astronomy, UCSB | Fall 2014/2016 |
| PHYS 6CL Introductory Experimental Physics, UCSB | Fall 2013 |

SERVICE AND OUTREACH

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| Referee for ApJ, MNRAS, and Nature Astronomy | 2019 – present |
| Panelist, Cycle 30 Hubble Space Telescope Proposals, STScI | Apr – Jun 2022 |
| Co-organizer, Astronomy Seminar, Texas A&M University | 2019 – 2022 |
| Co-organizer, Astrosymposium, Texas A&M University | Aug 2020 |
| External Reviewer, Cycle 28 Hubble Space Telescope Proposals, STScI | Mar – Apr 2020 |
| Speaker, Astronomy on Tap Santa Barbara | Mar 2019 |
| Panelist, APS Conference for Undergraduate Women in Physics | Jan 2019 |
| Judge, Chambliss Astronomy Achievement Student Awards, AAS | Jan 2019 |
| Graduate Mentor, UC LEADS Program, UCSB | 2018, 2019 |
| Member, Physics Circus, UCSB | 2014 – 2019 |
| Graduate Research Mentor, Worster Summer Research Fellowship Program, UCSB | Summer 2014/2016 |
| Co-organizer, Physics Undergraduate Summer Research Symposium, UCSB | 2016 |

OBSERVING EXPERIENCE

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| Keck Observatory, Keck I, LRIS | 5 nights |
| Keck Observatory, Keck II, NIRC2/LGSAO | 3 nights |
| MMT Observatory, Blue Channel Spectrograph | 1 night |
| MMT Observatory, Red Channel Spectrograph | 1 night |
| Apache Point Observatory, 3.5m, DIS | 7 half nights |
| McDonald Observatory, 2.7m, Virus-W | 3 nights |

PRESS RELEASE

- *Astronomer joins NMSU with NSF fellowship to research how galaxies evolve*, New Mexico State University News, Sept 16, 2022.
<https://newsroom.nmsu.edu/news/astrophysicist-joins-nmsu-with-nsf-fellowship-to-research-how-galaxies-evolve/s/f29b47f5-3667-40cb-a6ba-2c7e6067bb1c>
- *Cool Halo Gas Caught Spinning Like Galactic Disks*, Keck Observatory Science News, based on Martin, Ho, Kacprzak & Churchill (2019) ApJ article, Jun 18, 2019.
<http://www.keckobservatory.org/corotating-halo-gas/>
- *Faint Galactic Halos*, The Current—UC Santa Barbara News, based on Martin, Ho, Kacprzak & Churchill (2019) ApJ article, Jun 18, 2019.
<https://www.news.ucsb.edu/2019/019486/faint-galactic-halos>
- *Opportunity Knocks*, The Current—UC Santa Barbara News featuring the Worster Summer Research Fellowship program, an undergraduate summer research program supervised by graduate mentors, Sept 25, 2014.
<https://www.news.ucsb.edu/2014/014411/opportunity-knocks>