Anna Y. Q. Ho

California Institute of Technology
MC 249-17
1200 E. California Blvd.
Pasadena CA 91125

Email: ah@astro.caltech.edu
Homepage: annayqho.github.io

EDUCATION

2016-Present	PhD California Institute of Technology, Astrophysics Thesis: *The Landscape of Engine-Driven Explosions* Advisor: Prof. Shri Kulkarni
2015	M.S. California Institute of Technology, Astrophysics
2014	B.S. Massachusetts Institute of Technology, Physics

FELLOWSHIPS AND AWARDS

2014-2019	NSF Graduate Research Fellowship
2017	Affiliate, Keck Institute for Space Sciences (Division Award)
2017	Garmire Prize, Caltech (Division Award)
2014-2015	Fulbright Scholarship
2014	Ida M. Green Fellowship, MIT (Departmental Award)
2014	Ford Foundation Fellowship, Honorable Mention
2014	Karl Taylor Compton Prize, MIT (University Award)
2014	Chambliss Astronomy Achievement Student Awards, Honorable Mention
2013	First Place, Dewitt Wallace Prize for Science Writing for the Public, MIT

INVITED TALKS

2019	Stars and Planets Seminar, Harvard-Smithsonian CfA, Cambridge, MA
2019	SMA Seminar, Harvard-Smithsonian CfA, Cambridge, MA
2019	Brown Bag Lunch, MIT, Cambridge, MA
2019	UC Berkeley Department Lunch Talk, Berkeley, CA
2019	Press Panel, AAS Winter Meeting, Seattle, WA
2016	Gemini Observatory, La Serena, Chile

CONTRIBUTED TALKS

2019	STScI Spring Symposium, Baltimore, MD
2018	ZTF-Theory Network Meeting, KITP, Santa Barbara, CA
2019	ZTF-Theory Network Meeting, KITP, Santa Barbara, CA
2017	GROWTH Annual Meeting, Milwaukee, WI
2016	NRAO Lunch Seminar, Socorro, NM
2015	Boutiques & Experiments Conference, Caltech, Pasadena, CA
2015	SDSS-IV Collaboration Meeting, IFT UAM-CSIC, Madrid, Spain
2015	The Local Group Astrostatistics Conference, U. Mich, Ann Arbor, USA
2014	MPIA-AIP Milky Way & Local Volume Meeting, AIP, Potsdam, Germany
2014	Max Planck Institute for Astronomy, Heidelberg, Germany
2013	NRAO, Charlottesville, VA
2012	NRAO, Charlottesville, VA

WORKSHOPS

2017	LSST Winter School: Machine Learning, Data Visualization, Model Fitting, Caltech, Pasadena CA
2016	NRAO Summer School, Socorro, NM
2016	Instructor for Gemini Observatory Workshop on Data-Driven Modeling of Spectra, La Serena, Chile

OBSERVING EXPERIENCE

Radio	PI of 5 successful observing proposals (3 VLA, 1 VLBA, 1 GMRT)
Millimeter	PI of 5 successful observing proposals (3 SMA, 2 ALMA)
Optical	Over 10 observing nights on DBSP/P200, and LRIS/Keck

SCIENCE COMMUNICATION

Public Talks Fall 2015-present
Speaker *Los Angeles, CA*

- Since the beginning of graduate school, I have given several public talks per year for amateur astronomy societies and local observatories.

Science Policy Committee, Graduate Student Council Fall 2018-present
Chair *Pasadena, CA*

- I founded the committee and serve as the chair. We organize career panels and host speakers on topics in science policy.

Caltech Letters Spring 2018-present
Contributing Writer *Pasadena, CA*

- I write articles on my research for the public

Science and Engineering Policy At Caltech Fall 2017-present
Vice President *Pasadena, CA*

- Organize events and trips, lead lunch discussions on current events in science policy

Caltech Astronomy Outreach Feb 2015-present
Volunteer *Pasadena, CA*

- Run outreach evenings, give public talks, answer visitors' questions, facilitate telescope viewing

International Summer Symposium on Science and World Affairs Summer 2017
Participant and Speaker *Darmstadt, Germany*

- Selected to attend this annual international symposium
- Gave a talk entitled "Towards a Framework for Space Traffic Control"

TA for Undergraduate Course, The Evolving Universe Spring 2016

- Recognized as an "outstanding TA" by the Caltech registrar: "Students described Anna as caring, considerate, and committed . . . as well as being extremely effective at explaining and summarizing the course material. The sentiments in this quote were echoed by several other students: "She was consistently well-prepared for section, gave really good notes, and did a really good job of explaining potentially confusing material and clarifying misunderstandings. She was very in-tune with the difficulties students were having and did a very good job of resolving those difficulties."

TA for Graduate Course, Radio Astronomy Winter Term 2015-16

- Graded problem sets, held office hours

TA for Undergraduate Course, Basic Astronomy and the Galaxy Fall 2015

- Graded problem sets, held office hours

Teacher, Institute for Educational Advancement Fall 2016

- Designed and taught a nine-week course on multiwavelength astronomy for gifted 7-12 year olds

Haus der Astronomie: Center for Astronomy Education and Outreach Sept 2014-July 2015

- Organized and taught a cosmology workshop for high school students
- Wrote a press release for the Max Planck Institute for Astronomy
- Wrote a blog post for the UniverseToday news site

Congressional Visits Day March 2014

- Attended briefings about the federal budget process
- Set up and led meetings with Congressional Staff to advocate for federal funding for scientific research

AAS Astronomy Ambassadors Workshop January 2014
American Astronomical Society 223rd Meeting *National Harbor, MD*

- Selected for a two-day workshop on doing effective public outreach

MIT Educational Studies Program Fall 2010-Spring 2014
Teacher *Cambridge, MA*

- Designed and taught 12 different science classes for over 500 middle- and high-school students

MIT Admissions Blogger Fall 2010-Spring 2014
MIT Admissions Office *Cambridge, MA*

- Wrote weekly entries about MIT life, read by over 7,000 people daily
- Corresponded with prospective students through e-mail and webcasts

Course Assistant Spring 2013
MIT Physics Department *Cambridge, MA*

- Wrote lecture notes in LaTeX for the undergraduate Quantum I and Quantum II courses
- Graded weekly problem sets for the undergraduate Quantum I course

McCormick Public Observatory Summer 2012, Summer 2013
Public speaker and volunteer *Charlottesville, VA*

- Organized a volunteering program for National Radio Astronomy Observatory summer students
- Gave regular public talks at the observatory

5 FIRST- AND 2 SECOND-AUTHOR PUBLICATIONS

[1] Duffell, Paul C. and **Ho, A. Y. Q.** 2019, *How Dense a CSM is Sufficient to Choke a Jet?*, submitted to ApJ, (arXiv:1907.03768)

[2] **Ho, A. Y. Q.**, Goldstein, D. A., Schulze, S., et al. 2019, *Evidence for Late-stage Eruptive Mass-loss in the Progenitor to SN2018gep, a Broad-lined Ic Supernova: Pre-explosion Emission and a Rapidly Rising Luminous Transient*, submitted to ApJ, (arXiv:1904.11009)

[3] **Ho, A. Y. Q.**, Phinney, E. S., Ravi, V., et al. 2019, *AT2018cow: a luminous millimeter transient*, ApJ, **871**, 73 (arXiv:1810.10880)

[4] Casey, A.R., **Ho, A. Y. Q.**, et al. 2019, *Tidal interactions between binary stars drives lithium production in low-mass red giants*, ApJ, **880**, 125 (arXiv:1902.04102)

[5] **Ho, A. Y. Q.**, Kulkarni, S.R., Nugent, P. E. et al. 2018, et al. 2018, *iPTF Archival Search for Fast Optical Transients*, ApJ, **854**, 13 (arXiv:1712.00949)

[6] **Ho, A. Y. Q.**, Rix, H.-W., Ness, M. K., Hogg, D. W., et al. 2017, *Masses and Ages for 230,000 LAMOST Giants, via Their Carbon and Nitrogen Abundances*, ApJ, **841**, 40 (arXiv:1609.03195)

[7] **Ho, A. Y. Q.**, Ness, M. K., Hogg, D. W., et al. 2017, *Label Transfer from APOGEE to LAMOST: Precise Stellar Parameters for 450,000 LAMOST Giants*, ApJ, **836**, 5 (arXiv:1602.00303)

14 OTHER PUBLICATIONS

Blagorodnova, N., et al. (including Ho, A. Y. Q.) 2017, *iPTF16fnl: a faint and fast tidal disruption event in an E+A galaxy*, ApJ submitted, (arXiv:1703.00965)

Ting, Y.-S., Rix, H.-W., Conroy, C., **Ho, A. Y. Q.**, & Lin, J. 2017, (arXiv:1708.01758)

Casey, A. R., Hogg, D. W., Ness, M., Rix, H.-W., **Ho, Anna Y. Q.**, Gilmore, G. 2016 *The Cannon 2: A data-driven model of stellar spectra for detailed chemical abundance analyses*, ApJ submitted, (arXiv:1603.03040)

Ness, M., Hogg, D.W., Rix, H-W., **Ho, A. Y. Q.**, Zasowski, G. 2015, *The Cannon: A data-driven approach to stellar label determination*, ApJ, **808**, 16 (arXiv:1501.07604)

Ness, M., Hogg, D. W., Rix, H.-W., Martig, M., Pinsonneault, M. H., **Ho, A. Y. Q.** 2016, *Spectroscopic Determination of Masses (and Implied Ages) for Red Giants*, ApJ, **823**, 114 (arXiv:1511.08204)

Hogg, D. W., Casey, A. R., Ness, M., Rix, H.-W., Foreman-Mackey, D., Hasselquist, S., **Ho, Anna Y. Q.** et al. 2016, *Chemical tagging can work: Identification of stellar phase-space structures purely by chemical-abundance similarity*, ApJ, **833**, 262 (arXiv:1601.05413)