Anna Y. Q. Ho

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EDUCATION

California Institute of Technology (Caltech), Pasadena CA

- Ph.D., Astrophysics, Advisor: Prof. Shri Kulkarni — expected *June 2020*
- M.S., Astrophysics — *June 2017*

Massachusetts Institute of Technology (MIT), Cambridge MA

- B.S., Physics — *June 2014*

FELLOWSHIPS AND AWARDS

- NSF Graduate Research Fellowship — *2014-19*
- Affiliate, Keck Institute for Space Sciences (Division Award) — *2019*
- Garmire Prize, Caltech (Division Award) — *2017*
- Fulbright Scholarship — *2014-15*
- 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 — *2014*
- First Place, Dewitt Wallace Prize for Science Writing for the Public, MIT — *2013*

INVITED AND CONTRIBUTED TALKS

"SMA Observations of AT2018cow: A Prototype for Millimeter Time-Domain Astronomy"

- (Contributed) SMA Seminar, Harvard-Smithsonian CfA, Cambridge, MA — *April 2019*

"The Death Throes of a Stripped Massive Star"

- (Contributed) UC Berkeley Department Lunch Talk, Berkeley, CA — *April 2019*
- (Contributed) Stars and Planets Seminar, Harvard-Smithsonian CfA, Cambridge, MA — *April 2019*
- (Invited) Brown Bag Lunch, MIT, Cambridge, MA — *April 2019*
- (Contributed) STScI Spring Symposium, Baltimore, MD — *April 2019*

"Watching The Cow Shock Its Environment: The Millimeter-Wavelength Perspective"

- (Invited) Talk (Press Panel) at the AAS Winter Meeting, Seattle, WA — *January 2019*

"ZTF18abukavn (AT2018gep): a luminous, rapidly rising, high-velocity Ic-BL supernova"

- (Contributed) ZTF-Theory Network Meeting, KITP, Santa Barbara, CA — *December 2018*

"AT2018cow: a luminous millimeter transient"

- (Contributed) ZTF-Theory Network Meeting, KITP, Santa Barbara, CA — *July 2018*

"Dirty Fireballs and Orphan Afterglows: A Broader Landscape of Relativistic Explosions with ZTF"

- (Contributed) GROWTH Annual Meeting, Milwaukee, WI *October 2017*

"*The Cannon:* Data-Driven Spectral Modeling in the Era of Large Stellar Surveys"

- (Contributed) National Radio Astronomy Observatory Lunch Seminar *June 2016*
  National Radio Astronomy Observatory, Socorro, NM
- (Invited) Gemini Observatory Workshop, La Serena, Chile *March 2016*

"Using *The Cannon* to Exploit the Overlap Between Kepler & APOGEE"

- (Contributed) Boutiques & Experiments Conference, Caltech, Pasadena, CA *August 2015*

"Survey Cross-Calibration Using The Cannon: APOGEE Labels from LAMOST Spectra"

- (Contributed) SDSS-IV Collaboration Meeting *July 2015*
  Instituto de Fsica Terica IFT UAM-CSIC, Madrid, Spain
- (Contributed) The Local Group Astrostatistics Conference *June 2015*
  University of Michigan, Ann Arbor, USA

"The Cannon: A New Data-Driven Method for Retrieving Stellar Parameters and Abundances"

- (Contributed) MPIA-AIP Milky Way & Local Volume Meeting *November 2014*
  Institute for Astrophysics Potsdam (AIP), Potsdam, Germany

"Rotation Measures of Globular Cluster Pulsars as a Unique Probe of the Galactic Magnetic Field"

- (Contributed) Max Planck Institute for Astronomy, Heidelberg, Germany *October 2014*
- (Contributed) National Radio Astronomy Observatory, Charlottesville, VA *August 2013*

"Studies of Millisecond Pulsars in the Globular Cluster Terzan 5"

- (Contributed) National Radio Astronomy Observatory, Charlottesville, VA *August 2012*

POSTERS

"AT2018cow: A Luminous Millimeter Transient"

- American Astronomical Society 233rd Winter Meeting, Seattle, WA *January 2019*

"Rotation Measures of Globular Cluster Pulsars as a Unique Probe of the Galactic Magnetic Field"

- American Astronomical Society 223rd Meeting, National Harbor, MD *January 2014*
- Conference of Research Experiences for Undergraduates, *October 2013*
  Council on Undergraduate Research, Arlington, VA

"Survey Cross-Calibration Using *The Cannon*: LAMOST Labels on the APOGEE scale"

- Frontiers of Stellar Spectroscopy in the Local Group and Beyond, *April 2015*
  Max Planck Institute for Astronomy, Heidelberg, Germany

"Rotation Measures of Globular Cluster Pulsars as a Unique Probe of the Galactic Magnetic Field"

- American Astronomical Society 223rd Meeting, National Harbor, MD *January 2014*
- Conference of Research Experiences for Undergraduates, *October 2013*
  Council on Undergraduate Research, Arlington, VA

"A New Method for Measuring the Rotation Measures of Millisecond Pulsars in the Globular Cluster Terzan 5"

- American Astronomical Society 221st Meeting, Long Beach, CA *January 2013*

WORKSHOPS

- *Attendee,* LSST Winter School: Machine Learning, Data Visualization, Model Fitting
  Caltech, Pasadena CA January 2017
- *Attendee,* NRAO Summer School, Socorro, NM June 2016
- *Invited Instructor,* Gemini Observatory Workshop: March 2016
  Data Driven Modeling of Spectra using *The Cannon*, Gemini Observatory, La Serena, Chile

ACCEPTED PROPOSALS AS PI

SMA

- "A New Frontier in Cosmic Explosions"
  8 tracks at priority B *2018B*

ALMA

- "AT2018cow: the poster-child relativistic explosion
  for high-frequency time-domain astronomy"
  2.6 hours at highest priority *June 2018*

SMA

- "SMA Monitoring of the Rare Relativistic Supernova AT2018cow"
  80 hours *June 2018*

VLBA

- "Confirmation of superluminal motion for
  rare relativistic supernova AT2018cow"
  12 hours at Priority A *June 2018*

EVLA

- "MAXI 170808A, A Short Soft X-ray Transient"
  3 hours of DDT time at Priority C *August 2017*
- "A Short Soft Transient from MAXI: Detection of a Dirty Fireball?"
  3 hours of DDT time at Priority C *May 2017*
- "Monitoring the Pulsed and Continuum Fluxes of Eclipsing Binary Pulsar Terzan 5A"
  4 hours Priority B *February 2014*

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