Isabella Trierweiler

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EDUCATION

University of California Los Angeles, Los Angeles, CA
PhD student in Astronomy & Astrophysics

Yale University, New Haven, CT
Bachelor of Science, Astrophysics 2018

HONORS AND AWARDS

- UCLA Departmental Award for service in Diversity, Equity, and Inclusion (2020)
- George Beckwith Prize for Undergraduate Astronomy Research (2018)
- Saybrook College Research Fellowship (2017)
- National Science Foundation Research Experience for Undergraduates (2016)
- Yale Freshman Summer Research Grant (2015)

RESEARCH

Polluted White Dwarfs (present)
Advisor: Ed Young, UCLA
- Study of planetary system remnants around white dwarfs

Planetary Atmospheres (present)
Advisor: Hilke Schlichting, UCLA
- Analytical analysis of atmosphere loss caused by small projectiles

Planetesimal Collisional Cascades (2017-2018)
Undergraduate Thesis Project
Advisor: Greg Laughlin, Yale University
- Simulated disks of planetesimals using the N-body code *REBOUND* to search for disk conditions that allow for collisional cascades

Entropy of Galaxy Cluster Outskirts (2016-2017)
NSF REU Program
Advisor: Yuanyuan Su, Harvard-Smithsonian Center for Astrophysics
- Analyzed *Suzaku* x-ray data to determine relation between the flattening of entropy profiles at the outskirts of clusters and the richness of cluster environments
- Co-I on approved Chandra proposal to take new images of cluster MKW4 to correct for point sources in the *Suzaku* images

Growth of Brightest Cluster Galaxies (2015-2016)
Project as Research Assistant in Astronomy Department
Advisor: Louise Edwards, Yale University (now Cal Poly San Luis Obispo)
- Analysis of SparsePak IFU data from WIYN to characterize stellar populations across the BCG and surrounding Intracluster light to learn about the growth history of the BCG

Spectral Classification of Red Dwarf Stars (2013-2014)
Advisor: Andrew West, Christopher Theissen, Boston University
- Spectral classification and calculation of stellar motions for M-Dwarf stars

TEACHING

Yale Young Global Scholars Lead Instructor (2019)
- Designed and taught six seminars on astronomy for high school students
- Mentored students on a cryptocurrency research project

Stellar Evolution, Galaxies, and Cosmology TA (2021)
- Discussion section TA

Physics for Life Science TA (2020)
- Lead undergraduate labs related to introductory mechanics

Gravity and Black Holes TA (2019)
- Discussion section TA
- Designed discussions on introductory physics, planets, stars, and black holes

Introductory Astronomy: Life in the Universe TA (2018-2020)
- Discussion section TA
- Designed discussions on the formation of solar systems, development of life on Earth, habitability, observing and characterizing exoplanets

Introductory Astronomy: Nature of the Universe TA (2018-2019)
- Astronomy lab TA
- Taught introductions to spectra, telescopes, Kepler's laws, stellar evolution, cosmology

Yale ONEXYS Physics Coach (2017-2018)
- Tutor in summer program to prepare undergraduates for introductory physics classes
- Lead group of four students in weekly meetings to discuss physics problems
- Created weekly review materials for calculus, forces, kinematics

PUBLICATIONS AND PRESENTATIONS

- Sarkar A., Su Y., Randall S., Gastaldello F., Trierweiler I., White R., Kraft R., Miller E. (2021) Joint Suzaku and Chandra observations of the MKW4 galaxy group out to the virial radius. *Monthly Notices of the Royal Astronomical Society,* 501(3), 3767-3780. doi:10.1093/mnras/staa3858
- Edwards L.O.V., Salinas M., Stanley S., Holguin West O.E., Trierweiler I., Alpert H., Coelho P., Koppaka S., Tremblay G.R., Martel H., Li Y. (2021) Clocking the formation of today's largest galaxies: wide field integral spectroscopy of brightest cluster galaxies and their surroundings. *Monthly Notices of the Royal Astronomical Society,* 491(2), 2617-2638. doi:10.1093/mnras/stz2706
- Edwards L.O.V., Alpert H.S, Trierweiler I., Abraham T., Beizer V.G. (2016) Stellar populations of BCGs, close companions and intracluster light in Abell 85, Abell 2457 and IIZw108. *Monthly Notices of the Royal Astronomical Society,* 461(1), 230-239. doi:10.1093/mnras/stw1314

PRESENTATIONS

- *Public Talk,* Mount Diablo Astronomical Society, Mount Diablo, CA, November 2020
- *Poster Presentation,* American Astronomical Society 231, National Harbor, MD, January 2018
- *Plenary Talk,* Ivy League Undergraduate Research Symposium, University of Pennsylvania, November 2017
- *Poster Presentation,* American Astronomical Society 229, Grapevine, TX, January 2017
- IAU 321 Formation and Evolution of Galaxy Outskirts, Toledo, Spain, March 2016

SERVICE

UCLA Astronomy Outreach Coordinator (2019-Present)

- Coordinate interactive science booths at Exploring Your Universe, UCLA's most attended outreach event
- Host West LA chapter of Astronomy on Tap, a public science cafe
- Demonstrate astronomy experiments at local elementary schools
- Host panel discussions and workshops on applying to graduate school

UCLA Marginalized Identities in Physics and Astronomy Co-Chair (2018- present)

- Manage graduate/undergraduate mentoring program to increase support for marginalized students in physics classes

UCLA Physical Sciences Student Advisory Board for Diversity, Equity, and Inclusion (2020- 2021)

- Acted as physics and astronomy representative to division DEI committee to advise on new projects

Academic Strategies Mentor (2017-2018)
Yale Center for Teaching and Learning
- Consulted with undergraduate students to discuss overcoming academic challenges
- Held workshops on academic topics such as time management, thesis planning, managing workloads, communicating with professors
- Developed wiki of academic resources for STEM students, including finding research labs, funding options, and advice on courses

Yale Women in Physics (2017-2018)
- Served as Treasurer on board of WiP group
- Wrote yearly letter to faculty on behalf of the Climate and Diversity Committee discussing awareness of implicit bias in recommendation letters
- Hosted weekly tutoring groups for physics undergrads

WORKSHOPS AND GROUPS

Lick Observational Astronomy Workshop (2019)
- Observed and reduced imaging and spectral data from three telescopes at Lick Observatory

UCLA Machine Learning Reading Group (2018)
- Research machine learning methods and discuss their applications in astronomy