Evan Haze Núñez

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EDUCATION

California Institute of Technology - Pasadena, CA

<u>Doctor of Philosophy</u>: Astrophysics Expected June 2025

Master of Science: Astrophysics June 2021

California State Polytechnic University, Pomona May 2019

Bachelor of Science: Physics (Magna Cum Laude)

El Camino College (ECC) - Torrance, CA June 2017

Associate of Science: Physics, Astronomy, Mathematics,

Pre-Engineering, Physical Science (Magna Cum Laude)

Associate of Arts: General Studies Biology and Physical Sciences (Magna Cum Laude)

RESEARCH INTERESTS

high redshift galaxy evolution, hi-z circumgalactic medium, quasar absorber host galaxies, core collapse supernova yields, damped lyman alpha absorbers, galactic chemical evolution, stellar population synthesis, young stellar objects, stellar evolution, observational cosmology

HONORS AND AWARDS

Keck Institute for Space Studies Affiliate at Caltech	Winter 2022-Present
NSF GRFP Fellow at Caltech	Fall 2019-Present
Rose Hills Fellow at Caltech	Fall 2019-Summer 2020
Cal Poly Pomona "Poly Cup" for Best Talk Proposal	Spring 2019
2018 AAS Chambliss Astronomy Achievement Award for Poster Presentation	Winter 2018
Cal-Bridge 4th Cohort Scholar at Cal Poly Pomona	Fall 2017-Present
2017 El Camino College Natural Sciences Division Presidential Scholar Award	Spring 2017
Astronomy Award Recipient at El Camino College	Spring 2017
2017 Silver Medalist, University Physics Competition	Winter 2017

RESEARCH EXPERIENCE

High-Redshift Galaxies Group w/ Chuck Steidel	Spring 2021-Present
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Cahill Center for Astronomy and Astrophysics. Pasadena, CA

Galactic Archaeology Group w/ Evan Kirby Summer 2019-Present

Nieuwland Science Hall. Notre Dame, CA

Smithsonian Astrophysical Observatory REU w/ Joel Leja and Charlie Conroy Summer 2018

Harvard-Smithsonian Center for Astrophysics. Cambridge, MA

Undergraduate Researcher w/ Matthew Povich and Breanna Binder Summer2017-Spring 2019

Cal Poly Pomona. Pomona, CA

University of Wyoming REU w/ Joe Findlay and Adam Myers University of Wyoming. Laramie, WY.	Summer 2016
OBSERVING EXPERIENCE	
Keck/KCWI, 3 nights	2024A
Keck/MOSFIRE, 3 nights	2023B
Keck/KCWI, 3 nights	2023B
Keck/LRIS (Imaging), 1 night	2023A
Keck/MOSFIRE (Imaging), 1 nights	2023A
Keck/MOSFIRE, 3 nights	2023A
Keck/KCWI, 3 nights	2022B
Keck/KCWI, 3 nights	2022A
Keck/MOSFIRE, 4 nights	2022A
Keck/KCWI 1 night	2021B
P200 (Palomar)/PCWI Optical IFU, 1 night	2019B
Keck/DEIMOS, 1 nights	2019B
WIRO (University of Wyoming)/Long-Slit Spectrograph, 14 nights	2017
WIRO (University of Wyoming/DoublePrime Imager, 30 nights	2016
RESEARCH MENTORING	
Summer Undergraduate Research Fellows (SURF) Program. Caltech	Summer 2024
Charis Hall (Caltech '27)	
Freshman Summer Research Institute (FSRI) Experience. Caltech Charis Hall (Caltech '27)	Summer 2023
Freshman Summer Research Institute (FSRI) Experience. Caltech America Luna Herrera, Dilichi Obichukwu Nwankwo (BothCaltech'2	Summer 2021 <i>5)</i>
PEER MENTORING	
WAVE Undergrad Summer Fellows Pod Council Mentor. CIT	Summer 2024
Grace Kallman, Krystyn Roldan, Mina Thoresen, William Salazar, Anuranj Roy, Ananda Smith, Sophia Winney, Vaennessa Nickell	Summer 2024
WAVE Undergrad Summer Fellows Pod Council Mentor. CIT Cecilia Ochoa, Hanna Adamski, Miranda Zak, Mark Lewis, Kayla Smith	Summer 2023
WAVE Undergrad Summer Fellows Pod Council Mentor. CIT Juan Granieri, Nickholas Gutierrez, Sally Jiang, Ubaid Kazianga, Alexandra Masegian, Rey Squillance	Summer 2022
WAVE Undergrad Summer Fellows Pod Council Mentor. CIT Aldair Bonilla, Cameron Moffet-Smith, David Dumas, Daria Bonds, Derek Poletti, Frenly Espino, Sydney Hunt	Summer 2021
TEACHING POSITIONS	
Introduction to Astronomy (Ay 1). Teaching Assistant. CIT	Spring 2021
Galaxy Evolution/Formation (Ay 24). Teaching Assistant. <i>CIT</i> Stars and Galaxy (Ay 20) Teaching Assistant. <i>CIT</i> Physics Learning Assistant. <i>CPP</i>	Winter 2021 Fall 2020 Spring 2019

Astronomy Lab Night Assistant. ECC Fall 2015-Spring 2017

Supplemental Instruction Coach for Astronomy. ECC Fall 2015

OUTREACH POSITIONS

Caltech Astro Outreach Team. CIT

Student Telescope Operator. CPP

Outreach Talk Presenter. CPP

STEM Ambassador. ECC

Fall 2019-Present

Fall 2017-Spring 2019

Fall 2017-Spring 2019

Spring 2015-Spring 2017

EXTRACURRICULAR ACTIVITIES

Cal-Bridge Partnership Committee Member

Cal-Bridge Peer Mentoring Taskforce

PMA Division Diversity Task Force. CIT

Secretary/Member of Black Scientists and Engineers at Caltech. CIT

President/Founding Member for Mathematical Physics Club. ECC

Vice President/Secretary for Astronomy & Astrophysics Club. ECC

Spring 2015-Spring 2017

JPL Undergraduate Scholars (JPLUS). JPL/NASA

Spring 2015-Fall 2015

NASA Community College Aerospace Scholars (NCAS). JPL/NASA Fall 2015

SCIENCE/CONFERENCE TALKS

Astro Lunch Talk at UCLA October 2024 FLASH Lunch Talk at UC Santa Cruz October 2024 Astro Lunch Talk at University of Washington October 2024 GALFRESCA 2024 at Carnegie Observatories September 2024 Lunch Seminar at Carnegie Observatories (Invited) September 2024 Cal-Bridge Fall Conference 2024 at UC Irvine September 2024 Cosmology Seminar at UC Davis (Invited) August 2024 Observer Lunch at Northwestern/CIERA April 2024 Near Field Cosmology Weekly Meeting at UChicago April 2024 Astro Seminar at University of Notre Dame (Invited) April 2024 AAS 244 in New Orleans, LA January 2024 Resolving Galaxy Ecosystems Across All Scales at Chinese U of Hong Kong December 2023 Cal-Bridge Fall Conference at UC Berkeley October 2023 Astro Seminar at University of Kansas (Invited) October 2023 GALFRESCA 2023 at UC Riverside September 2023 Oasis in the Cosmic Desert at Arizona State University February 2023 DIffuse Gas around Galaxies Weekly Discussion at University of Washington October 2022 Astro Seminar at University of Notre Dame (Invited) August 2022 What Matters Around Galaxies in Champoluc Italy September 2022 Astro Seminar at University of Kansas (Invited) October 2021 AAS 240 in Pasadena, CA USA June 2022 GalFRESCA 2019 Conference at UC Irvine Summer 2019 STARRY Conference at Leeds, UK Summer 2019

California State Student Research Competition at CSU Sacramento (Invited)Spring 2018CAMPARE/Cal-Bridge Symposium at Cal Poly PomonaSummer 2018SAO REU Symposium at Harvard-Smithsonian Center for AstrophysicsSummer 2018

Creative Activities Conference at Cal Poly Pomona (Invited)

CAMPARE Symposium at Cal Poly Pomona
Summer Symposium at University of Wyoming

Spring 2018

Summer 2017 Summer 2016

PUBLIC/OUTREACH/DEI TALKS

Astro on Tap at Caltech Upward Bound Career Panel at Claremont Colleges (Remoote) BEAM LA Career Day 2 via Cal Poly Pomona (Remote) BEAM LA Career Day 1 via Cal Poly Pomona (Remote) West Torrance High School (alma mater) in Torrance, CA BEAM LA Career Day via Cal Poly Pomona (Remote) Summer 2021 West Torrance High School (alma mater) in Torrance, CA Spring 2021 BEAM LA Career Day via Cal Poly Pomona (Remote) Astronomy Night, Q&A Panelist at Caltech Astronomy Night, Q&A Panelist at Caltech Fall 2019 Madison Elementary School Astronomy Night in Pomona, CA California High School Astronomy Night in Pomona, CA Fall 2018 Physics Club Talk at El Camino College (alma mater) West Torrance High School (alma mater) in Torrance, CA Planetarium Show Presenter at El Camino College Fall 2016	Black In Science Conference via Cal-Bridge (Remote)	October 2023
BEAM LA Career Day 2 via Cal Poly Pomona (Remote) BEAM LA Career Day 1 via Cal Poly Pomona (Remote) West Torrance High School (alma mater) in Torrance, CA BEAM LA Career Day via Cal Poly Pomona (Remote) Summer 2021 BEAM LA Career Day via Cal Poly Pomona (Remote) Summer 2020 Astronomy Night, Q&A Panelist at Caltech Astronomy Night, Q&A Panelist at Caltech Madison Elementary School Astronomy Night in Pomona, CA California High School Astronomy Night in Pomona, CA Physics Club Talk at El Camino College (alma mater) West Torrance High School (alma mater) in Torrance, CA Spring 2018	Astro on Tap at Caltech	Spring 2021
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West Torrance High School (alma mater) in Torrance, CA Spring 2018	California High School Astronomy Night in Pomona, CA	Fall 2018
	Physics Club Talk at El Camino College (alma mater)	Spring 2018
Planetarium Show Presenter at <u>El Camino College</u> Fall 2016	West Torrance High School (alma mater) in Torrance, CA	Spring 2018
	Planetarium Show Presenter at <u>El Camino College</u>	Fall 2016

POSTER PRESENTATIONS

- 1. **E.H. Nunez,** E. Kirby, C. Steidel. *Constraints on Massive Star Yields using Very Metal Poor Clouds.* 2023, Future of Faculty Workshop, University of Notre Dame
- 2. **E.H. Nunez,** E. Kirby, C. Steidel. *Constraints on Massive Star Yields using Very Metal Poor Clouds.* 2021, American Astronomical Society
- 3. **E. H. Nunez**, J. Leja, and C. Conroy. *Using Distant Galaxies to Constrain the Ionizing Photon Budget of Massive Stars*. 2019, American Astronomical Society #233, id.364.16
- 4. **E. H. Nunez**, M. S. Povich, B. A. Binder, P. Broos, and L. K. Townsley. *Characterizing Intermediate-Mass, Pre-Main-Sequence Stars via X-Ray Emission*. 2018, Chandra Science Workshop on Accretion in Stellar Systems, id.3
- E. H. Nunez, M. S. Povich, B. A. Binder, P. Broos, and L. K. Townsley. *Characterizing Intermediate-Mass, Pre-Main-Sequence Stars via X-Ray Emission*. 2018, American Astronomical Society Meeting #231, id. 339.07 (Chambliss Astronomy Achievement Student Award Winner)
- 6. **E. H. Nunez**, N. Bassett, S. Deam, D. Dixon, E. Griffith, W. Harvey, D. Lee, B. Lyke, R. Parziale, C. Witherspoon, A. Myers, J. FIndlay, H. Kobulnicky, and D. Dale. *New quasar surveys with WIRO: Searching for high redshift (z~6) quasar candidates*. 2017, American Astronomical Society #229, id.250.07

PUBLICATIONS

Lead Author

- 1. **E. H. Nunez**, C. C. Steidel, E. N. Kirby, G. C. Rudie, N. Z. Prusinski, Y. Chen, Z. Zhuang, A. Strom, D. K. Erb, M. Pettini, *KBSS-InCLOSE II; Design and First Results from the Inner CGM of QSO Line of Sight Emitting Galaxies at z~2-3.* 2024, To be submitted winter 2024.
- 2. E. H. Nunez, C. C. Steidel, E. N. Kirby, G. C. Rudie, N. Z. Prusinski, Y. Chen, Z. Zhuang, A. Strom, D. K. Erb, M. Pettini, L. A. Welsh, D. Rupke, R. Cooke. KBSS-InCLOSE I; Design and First Results from the Inner CGM of QSO Line of Sight Emitting Galaxies at z~2-3. 2024, Accepted to Astrophysical Journal.

- 3. **E. H. Nunez**, E. N. Kirby, C. C. Steidel. *Empirical Constraints on Core Collapse Supernovae Yields using Very Metal Poor Damped Lyman Alpha Absorbers*. 2022, Astrophysical Journal, 927, 64
- 4. **E. H. Nunez**, M.S. Povich, B. A. Binder, L. K. Townsley, and P. S. Broos. *Characterizing the X-ray Emission of Intermediate-Mass Pre-Main-Sequence Stars*. 2021, AJ, 162, 153

Co-Author

- Zhuyun Zhuang; Evan N. Kirby; Charles C. Steidel; Mithi A. C. de los Reyes; Nikolaus Z. Prusinski; N. Leethochawalit; Minjung Park; Charlie Conroy; Evan H. Nuñez. Metals in Star-forming Galaxies with KCWI. I. Methodology and First Results on the Abundances of Iron, Magnesium, and Oxygen. 2024, ApJ, 972, 182
- 2. M. A. C. de los Reyes, E. N. Kirby, A. Ji, **E. H. Nunez**. *Simultaneous Constraints on the Star Formation History and Nucleosynthesis of Sculptor dSph.* Accepted to ApJ (Fall 2021).
- 3. Wang et al. (E. H. Nunez 25th author). Exploring Reionization-Era Quasars III: Discovery of 16 Quasars at 6.4 < z < 6.9 with DESI Legacy Imaging Surveys and UKIRT Hemisphere Survey and Quasar Luminosity Function at $z \sim 6.7$. 2019, ApJ, 884, 30.
- 4. M. S. Povich, J. S. Maldonado, **E. H. Nunez**, and T. Robitaille. *The Duration of Star Formation In Galactic Giant Molecular Clouds. I. The Great Nebula in Carina*. 2019, ApJ, 881, 37.