

PA CHIA THAO

CONTACT INFORMATION	UNC Chapel Hill Department of Physics & Astronomy Phillips Hall, Office 114A Chapel Hill, NC 27599	Website : https://pcthao.github.io/ Email : pachia@live.unc.edu ORCID : 0000-0001-5729-6576
RESEARCH INTERESTS	Observational astronomy, detection and characterization of young exoplanets, constraining stellar spot properties, transmission spectroscopy, and machine learning	
EDUCATION	University of North Carolina at Chapel Hill Fourth Year Graduate Student M.S., Physics & Astronomy Advisor: Dr. Andrew Mann	2019 – Current 2022
	Mount Holyoke College B.A. Astronomy & B.A. Physics; minor in Mandarin Advisor: Dr. Jason Young	2014 – 2017
RESEARCH APPOINTMENTS	– <i>Graduate Research Assistant</i> , UNC Chapel Hill, NC – <i>Pre-Doctoral Fellow</i> , Flatiron Institute CCA, NY – <i>Research Technician</i> , UNC Chapel Hill, NC – <i>Science Intern</i> , Gemini Observatory, HI – <i>Research Assistant</i> , Mount Holyoke College, MA – <i>TAURUS Scholar</i> , The University of Austin, TX – <i>NSF REU Scholar</i> , The University of Toledo, OH	Fall 2019 – Current Spring 2021 Fall 2018 – Summer 2019 Spring 2018 Spring 2016 – Fall 2017 Summer 2017 Summer 2016
AWARDS & ACHIEVEMENTS	NASA Exoplanet Explorers Program, Cohort 3 NC Space Grant Graduate Research Fellowship Program Zonta International Amelia Earhart Fellowship NSF Graduate Research Fellowship Program Jack Kent Cooke Foundation Scholarship MHC Summa Cum Laude / Mary Lyon Scholar Phi Beta Kappa (Academic Honor) Society American Association of University Women College Scholarship Sigma Pi Sigma (Physics Honor) Society US State Department Critical Language Scholarship – Beijing, China	Spring 2023 2022 – Current 2022 – Current 2019 – Current 2010 – Current 2018 Inducted 2018 2014 – 2017 Inducted 2016 Summer 2015
FIRST AUTHOR PUBLICATIONS	NASA ADS H-Index : 7 <i>Hazy with a Chance of Star Spots: Constraining the Atmosphere of Young Planet K2-33b</i> , Thao, P. , Mann, A.W., Gao, P., et al. 2022, ApJ, 165, 1, 23 <i>Zodiacal Exoplanets in Time (ZEIT) IX: a flat transmission spectrum and a high eccentricity for the young Neptune K2-25b as viewed by Spitzer</i> , Thao, P. , Mann, A.W., Johnson, M., et al. 2020, ApJ, 159, 1, 32	
OTHER REFEREED PUBLICATIONS	<i>TESS Hunt for Young and Maturing Exoplanets (THYME). IX. A 27 Myr Extended Population of Lower Centaurus Crux with a Transiting Two-planet System</i> , Wood et al. 2023, AJ, 165, 3, 85 <i>A Circumplanetary Dust Ring May Explain the Extreme Spectral Slope of the 10 Myr Young Exoplanet K2-33b</i> , Ohno et al. 2023, ApJ Letters, 940, 2, 30 <i>TESS Hunt for Young and Maturing Exoplanets (THYME). VII. Membership, Rotation, and Lithium in the Young Cluster Group-X and a New Young Exoplanet</i> , Newton et al. 2022, AJ, 164, 3, 115	

Transit Hunt for Young and Maturing Exoplanets (THYME). VIII. A Pleiades-age Association Harboring Two Transiting Planetary Systems from Kepler, Barber et al. 2022, AJ, 164, 3, 88

Activity and Rotation of Nearby Field M Dwarfs in the TESS Southern Continuous Viewing Zone, Francys et al. 2022, AJ, 163, 6, 257

**CONFERENCES
AND
CONTRIBUTED
TALKS**

Hazy with a Chance of Star Spots: Constraining the Atmosphere of Young Planet K2-33b. Poster presentation at ERES Meeting VIII in New Haven, CT (2023 June); Oral presentation at ExoExplorer Science Series, virtual (March 2023)

Planetary Origins: Probing the Atmosphere of a 17 Million Year Old Hot Jupiter, HIP 67522b. Oral presentation at NC Space Grant Symposium in Raleigh, NC (April 2023)

The Young Exoplanet K2-25b: Flat Spectrum and High Eccentricity. Poster presentation at AAS 233rd Meeting in Seattle, WA (2019 January); Poster presentation at *Kepler & K2 Science Conference V* in Glensdale, CA (2019 March)

Probing into the Atmosphere of the Young Exoplanet K2-25b. Poster presentation at AAS 231st Meeting in Washington D.C. (2018 January); Oral presentation at TAURUS Scholar's Symposium at UT Austin (2017 August)

– Awarded a FAMOUS (Funds for Astronomical Meetings: Outreach to Underrepresented Students) travel grant (\$1,000) to attend AAS

Space Telescope Observations of Hot Dust in Low Surface Brightness Galaxies. Senior Thesis defense at Mount Holyoke College in South Hadley, MA (2017 December)

– Received the Lynk Universal Application Funding (\$3,000) for summer research

**GRANTS &
PROPOSAL**

UNC College of Arts and Sciences DEI Grant on Unit Enhancement 2023
Grad-2-Undergrad Physics and Astronomy Mentoring Program – \$7,000
Co-PI on Magellan/Clay Telescope/LDSS3C 2023A
Constraining the atmosphere of K2-33b (Co-PIs: P. Gao, A. Mann)
Co-Investigator on *James Webb Space Telescope* Cycle 1 2021
The Atmosphere of a 17 Myr Hot Jupiter (PI: A. Mann) – \$97,020
Co-Investigator on Keck II 2020B
A Giant Planet (?) Transiting a Cool White Dwarf (PI: A. Mann) – \$12,550
Co-Investigator on Gemini North 2020B
Transmission Spectroscopy to Confirm the First White Dwarf Planet (PI: S. Xu)

**OBSERVING
EXPERIENCE**

SOAR Telescope (remote observing), CTIO 15 nights
Keck II, W.M Keck Observatory 3 half nights
Gemini North Telescope 3 half nights
WIYN 0.9-m Telescope, Kitt Peak Observatory 9 nights
Harlan J. Smith Telescope, McDonald Observatory 2 nights

TRAINING

Adult Mental Health First Aid Training – *Chapel Hill, NC* January 2022
UNC Green Zone Training – *Chapel Hill, NC* December 2021
UNC Safe Zone Training – *Chapel Hill, NC* August 2021

WORKSHOPS

Summer School in Statistics for Astronomers XV – *State College, PA* June 2019

**ACTIVITIES &
SERVICE**

– *Program Organizer*, UNC P&A Grad-2-Undergrad Mentoring 2021 – Current
– *STEM Professional*, Letters to a Pre-Scientist 2021 – Current
– *Ambassador*, UNC Shadow a Scientist 2020 – Current
– *Peer Reviewer*, UNC GRFP Peer Review Workshop 2019 – Current

- *Speaker*, UNC Society of Physics Graduate Student Panel Fall 2020
- *Scholarship Committee*, Hmong Student Association of Carolina 2019 – 2020
- *Journey Through the Universe Ambassador*, Gemini Observatory 2018
- *Physics Peer Mentor*, MHC Department of Physics 2017