

# Alex Stephen Polanski

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## EDUCATION

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<b>University of Kansas</b> Ph.D. in Physics, Advisor: Ian Crossfield	Lawrence, KS 2019–Current
<b>University of California, Santa Barbara</b> B.S. in Physics with a Minor in Astronomy & Planetary Science	Santa Barbara, CA 2017–2019
<b>El Camino College</b> A.S. in Physical Sciences	Gardena, CA 2014–2017

## RESEARCH POSITIONS

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<b>Graduate Research Assistant</b> Advisor: Ian Crossfield	University of Kansas 2019–Current
<b>Visiting Graduate Researcher</b> Advisor: Aurora Kesseli	Caltech/IPAC 2022–2022
<b>Undergraduate Researcher</b> Advisor: Philip Lubin	UC Santa Barbara 2018–2019

## DEPARTMENT LEADERSHIP & OUTREACH

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- Founding Organizer, KU Astro Nights 2021–2022  
*Kick-started and continue to organize monthly telescope viewings that are open to the public and routinely gather nearly 60 attendees.*
- Founder & President, Graduate Student Organization 2021–2022  
*Co-founder of the KU Physics & Astronomy Graduate Organization and current president.*
- Chair, Physics and Astronomy Locally Organized Assembly Committee 2020–2022  
*Coordinated a graduate student-led conference to showcase research by students from the University of Kansas physics department.*
- Graduate Rep, Physics and Astronomy DEI Committee 2020–2022  
*One of two Graduate representatives sitting on the Department's Diversity, Equity, and Inclusion committee.*
- Science Technology Engineering and Math (STEM) Ambassador 2016–2017  
*Conducted outreach to local public schools to encourage younger students to pursue science and engineering majors.*

## TALKS, COLLOQUIA, & POSTERS

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- UC Irvine Astrophysics Seminar (*UC Irvine, CA*) May 2023  
*A Tale of Two Surveys: Leveraging Keck/HIRES for a Holistic View of Exoplanetary Systems*
- UC Riverside Astrobiology Colloquium (*UC Riverside, CA*) May 2023  
*A Tale of Two Surveys: Leveraging Keck/HIRES for a Holistic View of Exoplanetary Systems*
- 241<sup>st</sup> Meeting of the American Astronomical Society (*Seattle, WA*) Jan. 2023  
*Keck Abundance Project: Chemical Assay of 15 Elements in Exoplanet Host Stars*
- Astronomy Associates of Lawrence (*Baker University, KS*) Feb. 2022  
*Understanding Exoplanets Through the Stars they Orbit*
- KU Astro Nights (*Lawrence, KS*) Feb. 2022  
*The Pleiades: Cultural Icon of the Winter Sky*
- 2021 Keck Science Meeting (*Poster, UC San Diego*) Oct. 2021  
*Keck Abundance Project: Precise Host-Star Abundances for the JWST Era*
- Physics and Astronomy Locally Organized Assembly (*Lawrence, KS*) Feb. 2021  
*Precise Exoplanet Host Star Abundances for the JWST Era*
- 236<sup>th</sup> Meeting of the American Astronomical Society (*Poster, Virtual*) June 2020  
*Wolf 503b: Super-Earth or Sub-Neptune?*
- University of Kansas Astronomy Graduate Colloquium (*Lawrence, KS*) Oct. 2020  
*Getting Acquainted with the Exoplanet Wolf 503b*

## TEACHING

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- **Instructor** Lawrence High School Fall 2022 –Spring 2023  
*Research Astronomy*
- **Teaching Assistant** University of Kansas Spring 2020 –Fall 2020  
*Astronomy 196 - Introductory Astronomy Lab*
- **Head Teaching Assistant** University of Kansas Fall 2019 –Spring 2020  
*Physics 114 - Introductory Physics Lab*
- **Teaching Assistant** El Camino College Fall 2015 –Spring 2017  
*Astronomy 12 - Observational Astronomy*

## AWARDS AND GRANTS

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- Barbara J. Anthony-Twarog Outreach Award, University of Kansas 2022
- Research Honors Award, UC Santa Barbara 2018
- Undergraduate Research and Creative Activities Grant, UC Santa Barbara 2018
- Letters and Science Dean's Honor List, UC Santa Barbara 2018
- Excellence in Astronomy Award, El Camino College 2016
- International Physics Competition Silver Medal 2016

## FIRST AUTHOR PUBLICATIONS

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- <sup>1</sup>A. S. Polanski, I. J. M. Crossfield, A. W. Howard, H. Isaacson, and M. Rice, “Chemical Abundances for 25 JWST Exoplanet Host Stars with KeckSpec”, arXiv:2207.13662 (2022).
- <sup>2</sup>A. S. Polanski, I. J. M. Crossfield, et al., “Wolf 503 b: Characterization of a Sub-Neptune Orbiting a Metal-poor K Dwarf”, **162**, 238, 238 (2021).

## CONTRIBUTING AUTHOR PUBLICATIONS

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- <sup>1</sup>J. Brande et al., “A Mirage or an Oasis? Water Vapor in the Atmosphere of the Warm Neptune TOI-674 b”, arXiv:2201.04197 (2022).
- <sup>2</sup>P. A. Dalba et al., “The TESS-Keck Survey. VIII. Confirmation of a Transiting Giant Planet on an Eccentric 261 Day Orbit ...”, **163**, 61, 61 (2022).
- <sup>3</sup>S. K. Grunblatt et al., “TESS Giants Transiting Giants II: The hottest Jupiters orbiting evolved stars”, arXiv:2201.04140 (2022).
- <sup>4</sup>A. Chontos et al., “The TESS-Keck Survey: Science Goals and Target Selection”, arXiv:2106.06156 (2021).
- <sup>5</sup>M. El Mufti et al., “TOI 560 : Two Transiting Planets Orbiting a K Dwarf Validated with iSHELL, PFS and HIRES RVs”, arXiv:2112.13448 (2021).
- <sup>6</sup>J. Lubin et al., “TESS-Keck Survey IX: Masses of Three Sub-Neptunes Orbiting HD 191939 ...”, arXiv:2108.02208 (2021).
- <sup>7</sup>M. G. MacDougall et al., “The TESS-Keck Survey. VI. Two Eccentric Sub-Neptunes Orbiting HIP-97166”, **162**, 265, 265 (2021).

## ACCEPTED OBSERVING PROPOSALS (PI)

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- **Keck/NIRC2 2023B:** *2 Nights* - AO Follow-up of TESS objects of interest
- **Keck/NIRC2 2023A:** *2 Nights* - AO Follow-up of TESS objects of interest
- **Keck/NIRC2 2022B:** *2 Nights* - AO Follow-up of TESS objects of interest

## WORKSHOPS AND SUMMER SCHOOLS

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- Sagan Exoplanet Summer Workshop (*Virtual*) July 2020
- JWST Master Class for Proposal Writing (*Lawrence, KS*) March 2020
- Dunlap School for Astronomical Instrumentation (*Toronto, Ontario*) July 2019
- NASA Community College Aerospace Scholars Program (*Pasadena, CA*) April 2016

## OBSERVING EXPERIENCE

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- **Palomar 200in:** PHARO - Palomar Observatory, CA. 3 nights.
- **Keck I (10m):** HIRES - W.M. Keck Observatory, Hawai‘i. 41 nights.

- **Keck II (10m):** NIRC2 - W.M. Keck Observatory, Hawai'i. 8 nights.
- **IRTF (3.2m):** iSHELL - NASA Infrared Telescope Facility, Hawai'i. 1 night.
- **Las Cumbres Observatory:** 0.4 Meter Telescopes - Multiple Locations.

## PROFESSIONAL PROGRAMS & SOCIETIES

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- Sigma Pi Sigma 2020 – Current
- APS Bridge Program 2019 – Current