

Jon K. ZINK, Ph.D.

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CURRENT TITLE: NASA HUBBLE POSTDOCTORAL FELLOW, CALTECH

PERSONAL DATA

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EDUCATION

- MAY 2021 Ph.D. in ASTRONOMY & ASTROPHYSICS, **University of California**, Los Angeles
Advisor: Prof. Brad Hansen
- MAY 2016 M.S. in PHYSICS, **California State University**, Northridge
Advisor: Prof. Damian Christian
- JUNE 2014 B.S. in ASTROPHYSICS, **University of California**, Los Angeles

TEACHING EXPERIENCE

- 2016 - 2020: Teaching Assistant **University of California**, Los Angeles
Astro 140: Cosmology
Astro 115: Statistical Mechanics
Astro 5: Life in the Universe
Physics 6A: Physics for Life Science
Astro 117: Radiation and Fluids
Astro 127: Stellar Atmospheres
Astro 4: Black Holes and Cosmic Catastrophes
- 2014 - 2016: Teaching Associate **California State University**, Northridge
Physics 100AL: Electricity and Magnetism Lab for Life Science
Physics 220BL: Electricity and Magnetism Lab
Astro 152L: Observational Astronomy

SCHOLARSHIPS AND AWARDS

- SEPT 2021 NASA Hubble/Sagan Postdoctoral Fellowship
- JUNE 2020 UCLA Dissertation Fellowship
- DECEMBER 2019 UCLA Astronomy Outstanding TA Award
- JANUARY 2019 IPAC Visiting Graduate Fellowship
- DECEMBER 2018 UCLA Astronomy Outstanding TA Award
- DECEMBER 2017 UCLA Astronomy Outstanding TA Award
- MAY 2016 CSUN Outstanding Graduate Award
- MAY 2015 CSUN Outstanding Graduate Student Scholarship

RESEARCH EXPERIENCE

University of California, Los Angeles

- Long-term analysis of the outer solar system dynamics
- Creation and analysis of data from automated *K2* transit detection pipeline
- Analysis of exoplanet demographics using Bayesian statistics. Specifically, investigating the probability of an Earth-like planet around a Sun-like star.

California State University, Northridge

- Used *WISE* and *2MASS* data to create a target list of exoplanet candidates with IR excess
- Analytical investigation of short gamma-ray bursts (GRBs), associating spectra of GRB with the host galaxy

SELECTION OF PUBLICATIONS

- Sarah Millholland, Matthias He, and **Jon Zink** 2022, *AJ*, **Accepted**, *Edge-of-the-Multis: Evidence for a Transition in the Outer Architectures of Compact Multi-Planet Systems*
- Jessie Christiansen, Sakhee Bhure, **Jon Zink**, et al. 2022, *AJ*, **163**, **6**, **254**, *Scaling K2. V. Statistical Validation of 60 New Exoplanets From K2 Campaigns 2-18*
- Jon Zink**, Kevin Hardegree-Ullman, Jessie Christiansen, et al. 2021, *AJ*, **162**, **6**, **259**, *Scaling K2. IV. A Uniform Planet Sample for Campaigns 1-8 and 10-18*
- Jon Zink**, Konstantin Batygin, and Fred Adams 2020, *AJ*, **160**, **5**, **232**, *The Great Inequality and the Dynamical Disintegration of the Outer Solar System*
- Jon Zink**, Kevin Hardegree-Ullman, Jessie Christiansen, et al. 2020, *AJ*, **160**, **2**, **94**, *Scaling K2. III. Comparable Planet Occurrence in the FGK Samples of Campaign 5 and Kepler*
- Jon Zink**, Kevin Hardegree-Ullman, Jessie Christiansen, et al. 2020, *AJ*, **159**, **4**, **154**, *Scaling K2. II. Assembly of a Fully Automated C5 Planet Candidate Catalog Using EDI-Vetter*
- Kevin Hardegree-Ullman, **Jon Zink**, Jessie Christiansen, et al. 2020, *ApJS*, **247**, **1**, **28**, *Scaling K2. I. Revised Parameters for 222,088 K2 Stars and a K2 Planet Radius Valley at 1.9 R_{\oplus}*
- Jon Zink** and Bradley Hansen 2019, *MNRAS*, **487**, **246–252**, *Accounting for Multiplicity in Calculating Eta Earth*
- Jon Zink**, Kevin Hardegree-Ullman, Jessie Christiansen, et al. 2019, *RNAAS*, **3**, **2**, **43**, *Catalog of New K2 Exoplanet Candidates from Citizen Scientists*
- Jon Zink**, Jessie Christiansen, and Bradley Hansen 2019, *MNRAS*, **483**, **4479–4494**, *Accounting for Incompleteness due to Transit Multiplicity in Kepler Occurrence Rates*
- Bradley Hansen and **Jon Zink** 2015, *MNRAS*, **450**, **4505–4520**, *On the Potentially Dramatic History of the Super-Earth Rho 55 Cancri e*

PRESS

- 11/25/21 Newsweek - [Astronomers Find Hundreds of New Worlds, Including Unusually Close Saturn-Sized Gas Giants](#)
- 09/16/21 Physics Today - [Plucking exoplanets out of noisy Kepler data](#)
- 06/11/21 Forbes Article - [We've Found 372 New Alien Planets Using A Long-Dead Telescope Say Scientists](#)
- 12/08/20 SyFi Wire Article - [Why Jupiter Could be the Final Girl of the Solar System - Until a Star Kicks it Out](#)
- 11/29/20 ScienceAlert Feature - [Our Solar System Is Going to Totally Disintegrate Sooner Than We Thought](#)
- 11/25/20 AAS Nova Research Feature - [The Eventual Fate of The Solar System](#)
- 11/24/20 Bad Astronomy Feature - [How our Galaxy Will Kill our Solar System in a Trillion Years, Planet by Planet](#)
- 10/29/20 Nature Astronomy Research Highlight - [The End of It All](#)

SUCCESSFUL PROPOSALS AS PI

- 2022B:** Keck, HIRESr (4 half nights), *Disentangling Thick and Thin Disk Planet Hosts*
- 2022A:** Keck, HIRESr (2 half nights), *Demystifying Planet Demographic Features with Precise K2 Stellar Parameters*
- 2021-2024:** NASA Hubble/Sagan Fellowship (\$300K), *Expanding Exoplanet Demographics to Identify Key Components of Planet Formation*
- 2019B:** Lick, Shane 120-inch (5 nights), *The Occurrence of Binary Contamination in the High Galactic Latitude K2 Fields*
- 2019B, 2020B:** Lick, Nickel 1-meter (2 nights), *The Astronomy Live! Summer Observing Workshop*

DEVELOPED SOFTWARE

- EDI-Vetter Unplugged:** www.github.com/jonzink/EDI_Vetter_unplugged
a user-friendly pip-installable Transiting Exoplanet Signal Vetting Code (available for Python)
- EDI-Vetter:** www.github.com/jonzink/EDI-Vetter
a Transiting Exoplanet Signal Vetting Code (available for Python)
- ExoMult:** www.github.com/jonzink/ExoMult
a Forward Modeling Algorithm for Exoplanet Population Synthesis (available for R and Python)

TALKS

- Assessing Galactic Influences on Planet Formation and System Dynamics Using Demographics.*
UC Davis, May 2022
NASA Goddard, May 2022
- Exploring Planet Demographics with K2*, TALK
Yale, March 2022
Princeton, March 2022
Caltech, November 2021
- Accounting for Selection Effects in the Kepler and K2 Exoplanet Samples*
AAS, January 2021
- Utilizing Kepler and K2 to Advance Exoplanet Demographics*
AAS, June 2021
Carnegie Observatories, March 2021
UC San Diego, February 2021
NASA Jet Propulsion Laboratory, December 2020
University of Arizona (Origins Seminar), November 2020
Columbia, November 2020
UC Irvine, November 2020
Harvard (CFA), November 2020
University of Michigan, October 2020
University of Washington, October 2020
University of Chicago, October 2020
UC Santa Cruz, September 2020
The University of Ohio, September 2020
Penn State University, September 2020
- A Uniform Sample of K2 Planets and Early Occurrence Results*
Exoplanet Demographics I, November 2020
- Scaling K2: Exoplanet Demographics with Galactic Archeology*
ExoSoCal, September 2020
Bay Area Exoplanet Meeting, September 2020
- Scaling K2: Come for the Stars, Stay for the Planets*
Harvard, August 2020
- Scaling K2: The Forgotten Statistical Mission*
Exoplanets III, July 2020
- A Measure of Local Galactic Planet Occurrence Using Transit Surveys*
Caltech, May 2020
UCLA, May 2020
- Assembly of a Fully Automated C5 Planet Candidate Catalog Using EDI-Vetter*
AAS, January 2020
- Accounting for Incompleteness due to Transit Multiplicity*
Kepler SciCon, March 2019
ExSoCal, Sept. 2018
- Dissolving the Kepler Dichotomy*, TALK
UCLA, Jan. 2018
- Examining the Reject Table of WISE for Exoplanet and Disk Sources*
ExSoCal: An Exoplanet Orbital Interaction, Sept. 2015

PROFESSIONAL SERVICE

- Referee for *Astronomical Journal*, *Astronomy & Astrophysics*, and *Nature Astronomy*
- 2021 UCLA Astronomy and Astrophysics Graduate Admissions Committee Member
- Spring 2021 AAS Press Panel Presenter

PUBLIC OUTREACH

- 2018-2020: Mentor to Undergraduate Researchers
2018-2020: [Exploring Your Universe \(EYU\)](#) Signatory
2018-2020: [High School Summer Observing Workshop](#) Coordinator
2018-2020: [Exoplanet Explorer](#) Team Member (Zooniverse)
2016-2020: UCLA Public Planetarium Show Presenter