

# Logan Pearce

Graduate student | NSF Graduate Fellow | Univ of Arizona & Steward Observatory

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## EDUCATION

### UNIVERSITY OF ARIZONA

#### PHD CANDIDATE IN ASTRONOMY

Current | Tucson, AZ

Degree expected Spring 2024

### UNIVERSITY OF TEXAS AT AUSTIN

#### BS IN ASTRONOMY (HONORS)

#### BS IN PHYSICS

May 2019 | Austin, TX

Cum. GPA: 3.93 / 4.0

#### MA IN EDUCATION

August 2014 | Austin, TX

Conc. in Secondary Engineering Ed.

Cum. GPA: 3.95 / 4.0

### NAVAL NUCLEAR POWER TRAINING COMMAND

#### REACTOR PLANT OPERATIONS & THEORY

March 2005 - March 2006 |

Charleston, SC & Ballston Spa, NY

### PURDUE UNIVERSITY

#### BS IN CHEMISTRY

May 2003 | W. Lafayette, IN

Cum. GPA: 3.11 / 4.0

## LINKS

Website:// [loganpearcescience.com](http://loganpearcescience.com)

Github:// [github.com/logan-pearce/](https://github.com/logan-pearce/)

LinkedIn:// [loganpearce](https://www.linkedin.com/in/loganpearce)

Twitter:// [@loganpearce](https://twitter.com/loganpearce)

## WORK EXPERIENCE

### UNIV. OF ARIZONA STEWARD OBSERVATORY | GRADUATE RESEARCH ASSISTANT

August 2019 - Current | Tucson, AZ

- PhD candidate in astronomy with specialty in high-contrast imaging.
- Completed requirements for a master's degree in astronomy in Nov 2021.
- NSF GRFP fellow.
- NSF GRFP INTERN program supplemental funding recipient
- Assisted ~20 students with NSF GRFP application preparation as a consultant with the UA GRFP Application Development Program.
- Taught exoplanet-based research projects to student veteran cohorts as part of the Warrior Scholar Project in summer 2020, 2021, and 2022.
- Taught workshops and consulted on application materials for ~25 student veterans applying to graduate school via the Diana Davis Spencer Scholars program.
- Founded the Student Veteran Research Network in August 2021.

### UNIV. OF TEXAS AT AUSTIN | RESEARCH ASSISTANT + LAB TECHNICIAN + WRITING CENTER CONSULTANT

August 2015 - August 2019 | Austin, TX

- Assisted >250 students on any piece of writing at any stage as a University Writing Center Consultant for 3 semesters.
- Assisted in all aspects of fabrication and testing of the VIRUS spectroscopic instrument for the Hobby Eberly Telescope Dark Energy Experiment for 2 semesters.

### KEALING MIDDLE SCHOOL | TEACHER, PHYSICS AND ENGINEERING

Aug 2009 - May 2015 | Austin, TX

- Created and implemented accelerated physics curriculum for 6th grade.
- Developed and implemented two engineering elective courses on flight and space exploration.
- Lead a team of ~20 teachers as 6th grade team leader, 2013-2015.
- Obtained master's degree in engineering education in August 2014.

### US NAVY | OFFICER, NUCLEAR POWER SPECIALIST

Mar 2006 - May 2008 | USS John C. Stennis (CVN-74), Bremerton, WA

- Managed all aspects of reactor plant operations as reactor Propulsion Plant Watch Officer in both at-sea wartime and maintenance conditions.
- Managed a team of 30 mechanics maintaining potentially-contaminated reactor plant systems as Mechanical Maintenance Division Officer.

May 2003 - Mar 2005 | USS Samuel B. Roberts (FFG-58), Mayport, FL

- Managed a team of 10 electronics technicians as Combat Electronics Division Officer.
- Managed all aspects of bridge and combat center operations as Bridge and Combat Center Watch Officer.

# PUBLICATIONS

## FIRST AUTHOR

- **Pearce, L. A.**, Males, J. R., Haffert, S. Y., Close, L. M., Long, J. D., et al. (2023) HIP 67506 C: MagAO-X confirmation of a new low-mass stellar companion to HIP 67506 A *Monthly Notices of the Royal Astronomical Society* 521, 4775
- **Pearce, L. A.**, Males, J. R., Weinberger, A. J., Long, J. D., Morzinski, K. M., et al. (2022) Companion mass limits for 17 binary systems obtained with binary differential imaging and MagAO/Clio *Monthly Notices of the Royal Astronomical Society* 515, 4487
- **Pearce, L. A.**, Kraus, A. L., Dupuy, T. J., Mann, A. W., Huber, D. (2021) Boyajian's Star B: The Co-moving Companion to KIC 8462852 A *The Astrophysical Journal* 909, 216
- **Pearce, L. A.**, Kraus, A. L., Dupuy, T. J., Mann, A. W., Newton, E. R., et al. (2020) Orbital Parameter Determination for Wide Stellar Binary Systems in the Age of Gaia *The Astrophysical Journal* 894, 115
- **Pearce, L. A.**, Kraus, A. L., Dupuy, T. J., Ireland, M. J., Rizzuto, A. C., et al. (2019) Orbital Motion of the Wide Planetary-mass Companion GSC 6214-210 b: No Evidence for Dynamical Scattering *The Astronomical Journal* 157, 71

## CONTRIBUTING AUTHOR

- Dupuy, T. J., Liu, M. C., Evans, E. L., Best, W. M. J., **Pearce, L. A.**, et al. (2023) On the masses, age, and architecture of the VHS J1256-1257AB b system *Monthly Notices of the Royal Astronomical Society* 519, 1688
- Venner, A., **Pearce, L. A.**, Vanderburg, A. (2022) An edge-on orbit for the eccentric long-period planet HR 5183 b *Monthly Notices of the Royal Astronomical Society* 516, 3431
- Christian, S., Vanderburg, A., Becker, J., Yahalomi, D. A., **Pearce, L.**, et al. (2022) A Possible Alignment Between the Orbits of Planetary Systems and their Visual Binary Companions *The Astronomical Journal* 163, 207
- Venner, A., Vanderburg, A., **Pearce, L. A.** (2021) True Masses of the Long-period Companions to HD 92987 and HD 221420 from Hipparcos-Gaia Astrometry *The Astronomical Journal* 162, 12
- Czech, D., Isaacson, H., **Pearce, L.**, Cox, T., Sheikh, S. Z., et al. (2021) The Breakthrough Listen Search for Intelligent Life: MeerKAT Target Selection *Publications of the Astronomical Society of the Pacific* 133, 064502
- Newton, E. R., Mann, A. W., Tofflemire, B. M., **Pearce, L. A.**, Rizzuto, A. C., et al. (2019) TESS Hunt for Young and Maturing Exoplanets (THYME): A Planet in the 45 Myr Tucana-Horologium Association *The Astrophysical Journal* 880, L17

## CO-AUTHOR

- Males, J. R., Close, L. M., Haffert, S., Long, J. D., Hedglen, A. D., et al. (**Pearce, L. A.**, 6 of 18) (2022) MagAO-X: current status and plans for Phase II *Adaptive Optics Systems VIII* 12185, 1218509
- Newton, E. R., Mann, A. W., Kraus, A. L., Livingston, J. H., Vanderburg, A., et al. (**Pearce, L. A.**, 15 of 53) (2021) TESS Hunt for Young and Maturing Exoplanets (THYME). IV. Three Small Planets Orbiting a 120 Myr Old Star in the Pisces-Eridanus Stream *The Astronomical Journal* 161, 65
- Close, L. M., Males, J., Long, J. D., Van Gorkom, K., Hedglen, A. D., et al. (**Pearce, L. A.**, 23 of 26) (2020) Prediction of the planet yield of the MaxProtoPlanetS high-contrast survey for H-alpha protoplanets with MagAO-X based on first light contrasts *Adaptive Optics Systems VII* 11448, 114480U
- Males, J. R., Close, L. M., Guyon, O., Hedglen, A. D., Van Gorkom, K., et al. (**Pearce, L. A.**, 20 of 20) (2020) MagAO-X first light *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series* 11448, 114484L
- Steckloff, J. K., Soderblom, J. M., Farnsworth, K. K., Chevrier, V. F., Hanley, J., et al. (**Pearce, L. A.**, 9 of 11) (2020) Stratification Dynamics of Titan's Lakes via Methane Evaporation *The Planetary Science Journal* 1, 26
- Vanderburg, A., Rappaport, S. A., Xu, S., Crossfield, I. J. M., Becker, J. C., et al. (**Pearce, L. A.**, 18 of 65) (2020) A giant planet candidate transiting a white dwarf *Nature* 585, 363
- Nielsen, L. D., Brahm, R., Bouchy, F., Espinoza, N., Turner, O., et al. (**Pearce, L. A.**, 7 of 77) (2020) Three short-period Jupiters from TESS. HIP 65Ab, TOI-157b, and TOI-169b *Astronomy and Astrophysics* 639, A76
- Blunt, S., Wang, J. J., Angelo, I., Ngo, H., Cody, D., et al. (**Pearce, L. A.**, 11 of 13) (2020) orbitize!: A Comprehensive Orbit-fitting Software Package for the High-contrast Imaging Community *The Astronomical Journal* 159, 89
- Cook, J. C., Dalle Ore, C. M., Protopapa, S., Binzel, R. P., Cruikshank, D. P., et al. (**Pearce, L. A.**, 26 of 28) (2019) The distribution of H<sub>2</sub>O, CH<sub>3</sub>OH, and hydrocarbon-ices on Pluto: Analysis of New Horizons spectral images *Icarus* 331, 148
- Mayo, A. W., Rajpaul, V. M., Buchhave, L. A., Dressing, C. D., Mortier, A., et al. (**Pearce, L. A.**, 23 of 30) (2019) An 11 Earth-mass, Long-period Sub-Neptune Orbiting a Sun-like Star *The Astronomical Journal* 158, 165

- Gaidos, E., Jacobs, T., LaCourse, D., Vanderburg, A., Rappaport, S., et al. (**Pearce, L.**, 7 of 16) (2019) Planetesimals around stars with TESS (PAST) - I. Transient dimming of a binary solar analogue at the end of the planet accretion era *Monthly Notices of the Royal Astronomical Society* 488, 4465
- Vanderburg, A., Huang, C. X., Rodriguez, J. E., Becker, J. C., Ricker, G. R., et al. (**Pearce, L. A.**, 36 of 51) (2019) TESS Spots a Compact System of Super-Earths around the Naked-eye Star HR 858 *The Astrophysical Journal* 881, L19

## PRESENTATIONS

### INVITED TALKS

- Invited speaker, IFA Exoplanets Lunch Seminar Univ of Hawai'i, Sep 2023
- Invited speaker, Exoplanets Seminar Univ of Cali. Berkeley, Jun 2023
- Invited speaker, Lab for Adaptive Optics Seminar Univ of Cali. Santa Cruz, Jun 2023
- Invited speaker, APS Lunch Seminar Univ of Colorado, Oct 2022
- Invited speaker, Gemini Observatory North, Hilo HI, Feb 2019

### CONTRIBUTED TALKS

- Other Worlds Laboratory, Santa Cruz CA, July 2023
- Bay Area Exoplanets Meeting, Mountain View CA, April 2023
- Alien Earths All Hands Meeting, Tucson AZ, 2023
- Steward Observatory Internal Symposium, Nov 2022
- Steward Observatory Internal Symposium, Nov 2019
- Texas Undergraduate Research Symposium, University of Texas at Austin, Oct 2018
- Texas Undergraduate Research Symposium, Rice University, Oct 2017
- Gulf Coast Undergraduate Research Symposium, Rice University, Oct 2016
- Fall Undergraduate Research Symposium, University of Texas at Austin, Sep 2016
- Texas Astronomy Undergraduate Research Symposium, Baylor University, Sep 2016
- REU Symposium, Northern Arizona University, Aug 2016

### OUTREACH TALKS

- Student Veterans of America National Convention, Orlando FL, 2022
- Astronomy on Tap Tucson, Dec 2021. Link: <https://www.youtube.com/watch?v=y-04uo6zsGE>
- Astronomy on Tap ATX, May 2019. Link: <https://www.youtube.com/watch?v=KAZRro0Qd7Y&t=291s>
- Univ of Texas Astronomy Board of Visitors Winter Meeting, Feb 2019
- Astronomy Student's Association, University of Texas at Austin, Oct 2018
- Astronomy Student's Association, University of Texas at Austin, Oct 2017

### POSTERS

- GMT Science Meeting, Washington DC, 2023
- Astrobiology Graduate Student Conference, San Diego, 2023
- Spirit of Lyot 2022, Leiden Netherlands, 2022
- AAS Division of Dynamical Astronomy, virtual, 2021
- Exoplanets III, virtual, 2020
- 233rd American Astronomical Society Meeting, Seattle, WA, 2019
- UC Berkeley Astronomy Department intern poster session, Univ of California Berkeley, 2018
- College of Natural Sciences Undergraduate Research Forum, University of Texas Austin, 2018
- Star and Planet Formation in the Southwest Conference, Oracle AZ, 2018
- 231st American Astronomical Society Meeting, National Harbor, MD, 2018
- Bash Fest, University of Texas at Austin, 2017
- 230st American Astronomical Society Meeting, Austin, TX, 2017
- College of Natural Sciences Undergraduate Research Forum, University of Texas Austin, 2017

### WORKSHOPS

- Various, Diana Davis Spencer Scholars, Warrior Scholar Project, 2022-2023
- Research Project Leader, Warrior Scholar Project, 24 July - 29 July 2022
- PhD and Grad School Basics, SVRN (virtual), June 2022
- Resume/CV Workshop, UA VETS Center, Jan 2022
- Graduate School Application, UA VETS Center, Fall 2021
- Research Project Leader, Warrior Scholar Project, 25 July - 30 July 2021

- Research Project Leader, Warrior Scholar Project, 21 June - 26 June 2020

## OBSERVING TIME AWARDED

### As PI

- MagAO-X 2022B: 18 hours
- MagAO-X 2022A: 6 hours
- Gemini/NIFS: 2 hours

## AWARDS AND FELLOWSHIPS

### GRADUATE

2023	NSF GRFP INTERN Supplemental Funding	to NASA Ames, April-Sept 2023
2021	Travel Grant	UArizona Graduate and Professional Student Council
2019	Graduate Research Fellowship	National Science Foundation

### UNDERGRADUATE

2019	Dean's Honored Graduate	Univ of Texas College of Natural Sciences
2019	George Mitchell Award	Univ of Texas Co-op
2019	Ralph Cutler Green Endowed Scholarship	Univ of Texas Astronomy/ McDonald Observatory Board of Visitors
2018	Astronaut Scholar	Astronaut Scholarship Foundation
2018	Barry Goldwater Scholar	Barry Goldwater Scholarship and Excellence in Education Foundation
2018	Jean Perkins Foundation Scholarship	Jean Perkins Foundation Grant for Undergraduate Combat Veterans
2017	Karl G. Henize Endowed Scholarship	Univ. of Texas at Austin Astronomy Department Award
2017	Chambliss Prize Honorable Mention	230th American Astronomical Society Meeting
2017	J. W. Cox Endowed Scholarship	J. W. Cox Endowment for the Advanced Studies in Astronomy
2017	Award for Excellence in Astronomy and Astrophysics Research	College of Natural Science Undergraduate Research Forum, University of Texas at Austin
2017	Jean Perkins Foundation Scholarship	Jean Perkins Foundation Grant for Undergraduate Combat Veterans
2016	Best Presentation	Fall Undergraduate Research Symposium, Univ. Texas
2016	Honorable Mention	Gulf Coast UG Research Symposium, Rice Univ.
2016	Jean Perkins Foundation Scholarship	Jean Perkins Foundation Grant for Undergraduate Combat Veterans
2015	W. Dawson Sterling Endowed Fellowship	Univ of Texas Board of Regents Award

### OTHER

2009	Teacher of Promise	Kealing MS, Austin TX
2008	US Navy Commendation Medal	USS John C. Stennis (CVN-74)

## BROADER IMPACTS

2023-	Mentor & Consultant	Diana Davis Spencer Scholars/ Warrior Scholar Project
2021-	Founder	Student Veterans Research Network
2020-	Research Project Leader	Warrior Scholar Project
2020-2021	Liaison	Steward Observatory DEI Mentoring Task Force
2019-	Co-host/ organizer	SpaceDrafts (Astronomy on Tap Tucson)
2016-2019	Graphics and Merchandise	Astronomy on Tap ATX
2016-2019	UG Representative	University of Texas Astronomy Department
2016-2017	Co-author	White paper for UT Astro Dept external review
2017	Co-founder	Undergraduate Astronomy Journal Club
2018	Peer mentor	Student Veteran Association

## REFERENCES

Dr. Jared Males	Steward Observatory, Univ of Arizona (jrmalese@email.arizona.edu)
Dr. Adam Kraus	University of Texas at Austin (alk@astro.as.utexas.edu)
Dr. Natasha Batalha	NASA Ames (natasha.e.batalha@nasa.gov)