

# Erik Petigura

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## CONTACT

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## EDUCATION

### **Ph.D. in Astrophysics, University of California, Berkeley**

Degree Date: May 2015

Thesis Title: *The Prevalence of Earth-size Planets Orbiting Sun-like Stars*

Thesis Advisor: Geoffrey Marcy

### **M.A. in Astrophysics, University of California, Berkeley**

Degree Date: December 2011

### **B.A. in Physics and Astrophysics, University of California, Berkeley**

Degree Date: May 2010

## APPOINTMENTS & EXPERIENCE

2019– Assistant Professor, University of California, Los Angeles  
2018–2019 Sagan Fellow, California Institute of Technology  
2015–2018 Hubble Fellow, California Institute of Technology  
2013–2015 Graduate Student Researcher, University of California, Berkeley  
2013–2014 Visiting Graduate Student, University of Hawaii, Mānoa  
2010–2013 NSF Graduate Research Fellow, University of California, Berkeley

## RESEARCH INTERESTS

Demographics of extrasolar planets; planet formation and evolution; radial velocities; transit timing variations; precision stellar astrophysics; high performance computing; signal processing; spectroscopy of exoplanet atmospheres; machine learning.

## HONORS AND AWARDS

2020 Outstanding Teaching Award, UCLA Physics & Astronomy Department  
2020 Sloan Fellowship  
2019 Scialog Fellow, Research Corporation for Science Advancement  
2015 Mary Elizabeth Uhl Prize, UC Berkeley Astronomy Department  
2014 Cozzarelli Prize, National Academy of Sciences [[Press Release](#)]  
2013 Block Award, Aspen Center for Physics  
2010 American Physical Society Apker Prize Finalist [[Announcement](#)]  
2010 Hertz Fellow Finalist  
2010 University Medal Finalist, UC Berkeley [[Press Release](#)]  
2010 Isidore Pomeranz Scholarship, UC Berkeley Physics Department  
2010 Dorothea Klumpke Roberts Prize, UC Berkeley Astronomy Department

## COLLOQUIA AND INVITED TALKS

<b>Date</b>	<b>Venue</b>
Mar 2020	Physics & Astronomy Colloquium, UCLA
Aug 2019	RESCEU Summer School, University of Tokyo
Apr 2019	Planetary Science Seminar, UC Santa Cruz
Nov 2018	Astronomy Colloquium, University of Arizona
Oct 2018	Astrophysics Colloquium, JPL
Aug 2018	Planetary Science Seminar, NASA Ames
Aug 2018	PRV Landscape Review, Caltech
Jun 2018	iREx Seminar U. Montreal
Mar 2018	Astronomy Colloquium, UCLA
Feb 2018	Astronomy Colloquium, University of Texas at Austin
Jan 2018	Astronomy Colloquium, Cornell Department
Jan 2018	Astronomy Colloquium, Caltech Department
Dec 2017	Exoplanets and Planet Formation, Shanghai
Oct 2017	Know Thy Star, Pasadena, California
Feb 2017	Physics Colloquium, University of California, Irvine
Oct 2016	Astronomy Colloquium, University of Texas, Austin
Sep 2016	Fellows at the Frontiers, Northwestern University
Mar 2016	Astronomy Colloquium, Tokyo University
Feb 2016	Planetary Science Division Seminar, Caltech
Oct 2015	iPLEX Seminar, UCLA
Oct 2015	Physics Colloquium, University of San Francisco
Jan 2015	Astronomy Tea Talk, Caltech
Jul 2014	Plenary Talk, Origins 2014, Nara, Japan
Jan 2014	Colloquium, University of Hawai'i Institute for Astronomy
Nov 2013	Kepler Science Conference, NASA Ames
Apr 2013	FLASH Talk, UC Santa Cruz Astronomy Department
Mar 2013	Yuk Lunch Seminar, Caltech
Sep 2012	Bay Area Exoplanet Science Meeting, SETI Institute, California

## OTHER TALKS

<b>Date</b>	<b>Venue</b>
Apr 2023	Extreme Precision Radial Velocities V, Santa Barbara California
Feb 2022	Exocoffee, MPIA [remote]
Mar 2019	Kepler Science Conference, Glendale
Oct 2018	Planetary Science Seminar, Imperial College London
Sep 2018	ExoSoCal 2018, Caltech
Aug 2017	Keck Science Meeting, Santa Cruz, CA
Jun 2017	Kepler Science Conference, NASA Ames
May 2017	Caltech Astronomy Department Tea Talk
Mar 2017	Formation and Dynamical Evolution of Exoplanets, Aspen, Colorado
Sep 2016	Keck Science Meeting, Pasadena, CA
Nov 2015	Extreme Solar Systems III, Kona, Hawai'i
Oct 2015	K2 Science Meeting, Santa Barbara, California
Sep 2015	Keck Science Meeting, 2015
Jan 2015	AAS Meeting, Seattle, Washington
Sep 2014	Toward Other Earths: The Star-Planet Connection, Porto, Portugal
Feb 2013	Exoplanets in Multi-body Systems in the Kepler Era, Aspen, Colorado
Jan 2013	AAS Meeting, Long Beach, California
Jun 2012	AAS Meeting, Anchorage, Alaska
Sep 2011	Extreme Solar Systems II, Jackson Hole, Wyoming
May 2009	APS April Meeting, Denver, Colorado

## TEACHING EXPERIENCE

<b>Date</b>	<b>Institution</b>	<b>Role</b>
2023	UCLA	Instructor: Radiative Processes - ASTR 281
2023	UCLA	Instructor: Evolution of the Cosmos and Life - CLUSTER 70
2022	UCLA	Instructor: Evolution of the Cosmos and Life - CLUSTER 70
2022	UCLA	Practice of Scientific Presentations in Astronomy - ASTR 297
2021	UCLA	Instructor: Evolution of the Cosmos and Life - CLUSTER 70
2021	UCLA	Instructor: Astrophysics Laboratory - ASTR 180
2020	UCLA	Instructor: Evolution of the Cosmos and Life - CLUSTER 70
2020	UCLA	Instructor: Nature of the Universe - ASTR 3
2011	UC Berkeley	Graduate Student Instructor: The Planets
2011	UC Berkeley	Graduate Student Instructor: Optical/IR Lab

## STUDENT MENTORSHIP

### **Luke Handley, UCLA Undergraduate (2022–present)**

Project: Automated scheduling of Keck Planet Finder observations.

### **Greg Gilbert, UCLA Postdoc (2021–present)**

Project: Characterizing the sizes, orbits, and architectures of extrasolar planets through hierarchical modeling of large photometric datasets.

### **Dakotah Tyler, UCLA Graduate Student (2020–present)**

Project: Direct and indirect observations of exoplanet exospheres and mass-loss.

### **Isabel Angelo, UCLA Graduate Student (2019–present)**

Project: Understanding the extreme eccentricity of KOI-367.

### **Jon Zink, UCLA Graduate Student and Postdoc (2019–2021)**

Project: Detection, characterization, and demographic analysis of exoplanets from K2 photometry. Co-advised with Jessie Christiansen (IPAC) and Brad Hansen (UCLA). A key result was the detection of 366 new extrasolar planets (published in [AJ](#), press release through [UCLA](#), coverage in [Newsweek](#) and other sources).

**Judah Van Zandt, UCLA Graduate Student (2019–present)**

Project: RV survey of distant giant companions to TESS exoplanets.

**Mason MacDougall, UCLA Graduate Student (2018–present)**

Project: Exoplanet eccentricities.

**Grant Regen, Stanford Undergraduate (2018–2020)**

Project: Transmission spectroscopy of sub-Saturns.

**Aida Behmard, Caltech Graduate Student (2017–2019)**

Project: Spectroscopic characterization of cool stars.

**Sarah Blunt, Caltech Postbaccalaureate Scholar (2017–2019)**

Project: Gaussian process noise modeling of RV timeseries.

**Madison Brady, Caltech Undergraduate (2017–2018)**

Project: Mass and eccentricity measurements through radial velocities.

**Samuel Yee, Caltech Undergraduate (2016–2018)**

Projects: Created an open-source library of high resolution, high signal-to-noise spectra of touchstone stars and developed a classification algorithm called “SpecMatch-Empirical” (published in [ApJ](#), [[Project Website](#)]). Also, the discovery, characterization, and dynamical analysis of HAT-P-11c.

**Trevor David, Caltech Graduate Student (2015–2017)**

Projects: Served as a co-adviser with Lynne Hillenbrand on several projects to study planet formation around young stars. This includes the discovery of K2-33b, a Neptune-sized planet transiting a newborn star (published in [Nature](#)).

## SELECTED PUBLICATIONS (1ST-3RD AUTHOR)

Publications have received 5114 citations as of 2023-10-23 (NASA astrophysics data system)

1. MacDougall, M. G., Gilbert, G. J., and **Petigura, E. A.** 2023, “Accurate and Efficient Photoeccentric Transit Modeling”, *The Astronomical Journal*, 166, 61. [\[ADS\]](#).
2. MacDougall, M. G., **Petigura, E. A.**, Gilbert, G. J., and 38 colleagues 2023, “The TESS-Keck Survey. XV. Precise Properties of 108 TESS Planets and Their Host Stars”, *The Astronomical Journal*, 166, 33. [\[ADS\]](#).
3. Van Zandt, J., **Petigura, E. A.**, MacDougall, M., and 42 colleagues 2023, “TESS-Keck Survey. XIV. Two Giant Exoplanets from the Distant Giants Survey”, *The Astronomical Journal*, 165, 60. [\[ADS\]](#).
4. Gilbert, G. J., MacDougall, M. G., and **Petigura, E. A.** 2022, “Implicit Biases in Transit Models Using Stellar Pseudo Density”, *The Astronomical Journal*, 164, 92. [\[ADS\]](#).
5. MacDougall, M. G., **Petigura, E. A.**, Fetherolf, T., and 58 colleagues 2022, “The TESS-Keck Survey. XIII. An Eccentric Hot Neptune with a Similar-mass Outer Companion around TOI-1272”, *The Astronomical Journal*, 164, 97. [\[ADS\]](#).
6. Johnson, M. C., David, T. J., **Petigura, E. A.**, and 22 colleagues 2022, “An Aligned Orbit for the Young Planet V1298 Tau b”, *The Astronomical Journal*, 163, 247. [\[ADS\]](#).
7. Angelo, I., Naoz, S., **Petigura, E.**, and 4 colleagues 2022, “Kepler-1656b’s Extreme Eccentricity: Signature of a Gentle Giant”, *The Astronomical Journal*, 163, 227. [\[ADS\]](#).
8. **Petigura, E. A.**, Rogers, J. G., Isaacson, H., and 10 colleagues 2022, “The California-Kepler Survey. X. The Radius Gap as a Function of Stellar Mass, Metallicity, and Age”, *The Astronomical Journal*, 163, 179. [\[ADS\]](#).
9. Masuda, K., **Petigura, E. A.**, and Hall, O. J. 2022, “Inferring the rotation period distribution of stars from their projected rotation velocities and radii: Application to late-F/early-G Kepler stars”, *Monthly Notices of the Royal Astronomical Society*, 510, 5623. [\[ADS\]](#).
10. MacDougall, M. G., **Petigura, E. A.**, Angelo, I., and 45 colleagues 2021, “The TESS-Keck Survey. VI. Two Eccentric Sub-Neptunes Orbiting HIP-97166”, *The Astronomical Journal*, 162, 265. [\[ADS\]](#).
11. Louden, E. M., Winn, J. N., **Petigura, E. A.**, and 5 colleagues 2021, “Hot Stars with Kepler Planets Have High Obliquities”, *The Astronomical Journal*, 161, 68. [\[ADS\]](#).
12. **Petigura, E. A.** 2020, “Two Views of the Radius Gap and the Role of Light Curve Fitting”, *The Astronomical Journal*, 160, 89. [\[ADS\]](#).
13. Petit, A. C., **Petigura, E. A.**, Davies, M. B., and 1 colleagues 2020, “Resonance in the K2-19 system is at odds with its high reported eccentricities”, *Monthly Notices of the Royal Astronomical Society*, 496, 3101. [\[ADS\]](#).
14. Millholland, S., **Petigura, E.**, and Batygin, K. 2020, “Tidal Inflation Reconciles Low-density Sub-Saturns with Core Accretion”, *The Astrophysical Journal*, 897, 7. [\[ADS\]](#).
15. Weiss, L. M. and **Petigura, E. A.** 2020, “The Kepler Peas in a Pod Pattern is Astrophysical”, *The Astrophysical Journal*, 893, L1. [\[ADS\]](#).
16. **Petigura, E. A.**, Livingston, J., Batygin, K., and 11 colleagues 2020, “K2-19b and c are in a 3:2 Commensurability but out of Resonance: A Challenge to Planet Assembly by Convergent Migration”, *The Astronomical Journal*, 159, 2. [\[ADS\]](#).
17. David, T. J., **Petigura, E. A.**, Luger, R., and 4 colleagues 2019, “Four Newborn Planets Transiting the Young Solar Analog V1298 Tau”, *The Astrophysical Journal*, 885, L12. [\[ADS\]](#).
18. Behrmard, A., **Petigura, E. A.**, and Howard, A. W. 2019, “Data-driven Spectroscopy of Cool Stars at High Spectral Resolution”, *The Astrophysical Journal*, 876, 68. [\[ADS\]](#).

19. Mills, S. M., Howard, A. W., **Petigura, E. A.**, and 3 colleagues 2019, “The California-Kepler Survey. VIII. Eccentricities of Kepler Planets and Tentative Evidence of a High-metallicity Preference for Small Eccentric Planets”, *The Astronomical Journal*, 157, 198. [\[ADS\]](#).
20. Livingston, J. H., Crossfield, I. J. M., **Petigura, E. A.**, and 13 colleagues 2018, “Sixty Validated Planets from K2 Campaigns 5-8”, *The Astronomical Journal*, 156, 277. [\[ADS\]](#).
21. Fulton, B. J. and **Petigura, E. A.** 2018, “The California-Kepler Survey. VII. Precise Planet Radii Leveraging Gaia DR2 Reveal the Stellar Mass Dependence of the Planet Radius Gap”, *The Astronomical Journal*, 156, 264. [\[ADS\]](#).
22. Brady, M. T., **Petigura, E. A.**, Knutson, H. A., and 6 colleagues 2018, “Kepler-1656b: A Dense Sub-Saturn with an Extreme Eccentricity”, *The Astronomical Journal*, 156, 147. [\[ADS\]](#).
23. **Petigura, E. A.**, Benneke, B., Batygin, K., and 8 colleagues 2018, “Dynamics and Formation of the Near-resonant K2-24 System: Insights from Transit-timing Variations and Radial Velocities”, *The Astronomical Journal*, 156, 89. [\[ADS\]](#).
24. Yee, S. W., **Petigura, E. A.**, Fulton, B. J., and 10 colleagues 2018, “HAT-P-11: Discovery of a Second Planet and a Clue to Understanding Exoplanet Obliquities”, *The Astronomical Journal*, 155, 255. [\[ADS\]](#).
25. Fulton, B. J., **Petigura, E. A.**, Blunt, S., and 1 colleagues 2018, “RadVel: The Radial Velocity Modeling Toolkit”, *Publications of the Astronomical Society of the Pacific*, 130, 044504. [\[ADS\]](#).
26. **Petigura, E. A.**, Marcy, G. W., Winn, J. N., and 7 colleagues 2018, “The California-Kepler Survey. IV. Metal-rich Stars Host a Greater Diversity of Planets”, *The Astronomical Journal*, 155, 89. [\[ADS\]](#).
27. **Petigura, E. A.**, Crossfield, I. J. M., Isaacson, H., and 10 colleagues 2018, “Planet Candidates from K2 Campaigns 5-8 and Follow-up Optical Spectroscopy”, *The Astronomical Journal*, 155, 21. [\[ADS\]](#).
28. Weiss, L. M., Marcy, G. W., **Petigura, E. A.**, and 10 colleagues 2018, “The California-Kepler Survey. V. Peas in a Pod: Planets in a Kepler Multi-planet System Are Similar in Size and Regularly Spaced”, *The Astronomical Journal*, 155, 48. [\[ADS\]](#).
29. Winn, J. N., **Petigura, E. A.**, Morton, T. D., and 8 colleagues 2017, “Constraints on the Obliquities of Kepler Planet-hosting Stars”, *The Astronomical Journal*, 154, 270. [\[ADS\]](#).
30. Johnson, J. A., **Petigura, E. A.**, Fulton, B. J., and 11 colleagues 2017, “The California-Kepler Survey. II. Precise Physical Properties of 2025 Kepler Planets and Their Host Stars”, *The Astronomical Journal*, 154, 108. [\[ADS\]](#).
31. Fulton, B. J., **Petigura, E. A.**, Howard, A. W., and 10 colleagues 2017, “The California-Kepler Survey. III. A Gap in the Radius Distribution of Small Planets”, *The Astronomical Journal*, 154, 109. [\[ADS\]](#).
32. **Petigura, E. A.**, Howard, A. W., Marcy, G. W., and 12 colleagues 2017, “The California-Kepler Survey. I. High-resolution Spectroscopy of 1305 Stars Hosting Kepler Transiting Planets”, *The Astronomical Journal*, 154, 107. [\[ADS\]](#).
33. Sinukoff, E., Howard, A. W., **Petigura, E. A.**, and 20 colleagues 2017, “K2-66b and K2-106b: Two Extremely Hot Sub-Neptune-size Planets with High Densities”, *The Astronomical Journal*, 153, 271. [\[ADS\]](#).
34. **Petigura, E. A.**, Sinukoff, E., Lopez, E. D., and 12 colleagues 2017, “Four Sub-Saturns with Dissimilar Densities: Windows into Planetary Cores and Envelopes”, *The Astronomical Journal*, 153, 142. [\[ADS\]](#).
35. David, T. J., **Petigura, E. A.**, Hillenbrand, L. A., and 14 colleagues 2017, “A Transient Transit Signature Associated with the Young Star RIK-210”, *The Astrophysical Journal*, 835, 168. [\[ADS\]](#).
36. Sinukoff, E., Howard, A. W., **Petigura, E. A.**, and 19 colleagues 2017, “Mass Constraints of the WASP-47 Planetary System from Radial Velocities”, *The Astronomical Journal*, 153, 70. [\[ADS\]](#).
37. Yee, S. W., **Petigura, E. A.**, and von Braun, K. 2017, “Precision Stellar Characterization of FGKM Stars using an Empirical Spectral Library”, *The Astrophysical Journal*, 836, 77. [\[ADS\]](#).

38. Benneke, B., Werner, M., **Petigura, E.**, and 13 colleagues 2017, “Spitzer Observations Confirm and Rescue the Habitable-zone Super-Earth K2-18b for Future Characterization”, *The Astrophysical Journal*, 834, 187. [\[ADS\]](#).
39. Crossfield, I. J. M., Ciardi, D. R., **Petigura, E. A.**, and 41 colleagues 2016, “197 Candidates and 104 Validated Planets in K2’s First Five Fields”, *The Astrophysical Journal Supplement Series*, 226, 7. [\[ADS\]](#).
40. Sinukoff, E., Howard, A. W., **Petigura, E. A.**, and 14 colleagues 2016, “Eleven Multiplanet Systems from K2 Campaigns 1 and 2 and the Masses of Two Hot Super-Earths”, *The Astrophysical Journal*, 827, 78. [\[ADS\]](#).
41. David, T. J., Hillenbrand, L. A., **Petigura, E. A.**, and 10 colleagues 2016, “A Neptune-sized transiting planet closely orbiting a 5-10-million-year-old star”, *Nature*, 534, 658. [\[ADS\]](#).
42. Schlieder, J. E., Crossfield, I. J. M., **Petigura, E. A.**, and 21 colleagues 2016, “Two Small Temperate Planets Transiting Nearby M Dwarfs in K2 Campaigns 0 and 1”, *The Astrophysical Journal*, 818, 87. [\[ADS\]](#).
43. **Petigura, E. A.**, Howard, A. W., Lopez, E. D., and 11 colleagues 2016, “Two Transiting Low Density Sub-Saturns from K2”, *The Astrophysical Journal*, 818, 36. [\[ADS\]](#).
44. **Petigura, E. A.**, Schlieder, J. E., Crossfield, I. J. M., and 11 colleagues 2015, “Two Transiting Earth-size Planets Near Resonance Orbiting a Nearby Cool Star”, *The Astrophysical Journal*, 811, 102. [\[ADS\]](#).
45. Crossfield, I. J. M., **Petigura, E.**, Schlieder, J. E., and 24 colleagues 2015, “A Nearby M Star with Three Transiting Super-Earths Discovered by K2”, *The Astrophysical Journal*, 804, 10. [\[ADS\]](#).
46. **Petigura, E. A.** 2015, “Prevalence of Earth-size Planets Orbiting Sun-like Stars”, *Ph.D. Thesis.*, [\[ADS\]](#).
47. Marcy, G. W., Weiss, L. M., **Petigura, E. A.**, and 3 colleagues 2014, “Occurrence and core-envelope structure of 1-4× Earth-size planets around Sun-like stars”, *Proceedings of the National Academy of Science*, 111, 12655. [\[ADS\]](#).
48. **Petigura, E. A.**, Howard, A. W., and Marcy, G. W. 2013, “Prevalence of Earth-size planets orbiting Sun-like stars”, *Proceedings of the National Academy of Science*, 110, 19273. [\[ADS\]](#).
49. **Petigura, E. A.**, Marcy, G. W., and Howard, A. W. 2013, “A Plateau in the Planet Population below Twice the Size of Earth”, *The Astrophysical Journal*, 770, 69. [\[ADS\]](#).
50. **Petigura, E. A.** and Marcy, G. W. 2012, “Identification and Removal of Noise Modes in Kepler Photometry”, *Publications of the Astronomical Society of the Pacific*, 124, 1073. [\[ADS\]](#).
51. **Petigura, E. A.** and Marcy, G. W. 2011, “Carbon and Oxygen in Nearby Stars: Keys to Protoplanetary Disk Chemistry”, *The Astrophysical Journal*, 735, 41. [\[ADS\]](#).

## OTHER PUBLICATIONS

52. Akana Murphy, J. M., Batalha, N. M., Scarsdale, N., and 45 colleagues 2023, “The TESS-Keck Survey. XVI. Mass Measurements for 12 Planets in Eight Systems”, *The Astronomical Journal*, 166, 153. [\[ADS\]](#).
53. Dai, F., Schlaufman, K. C., Reggiani, H., and 48 colleagues 2023, “A Mini-Neptune Orbiting the Metal-poor K Dwarf BD+29 2654”, *The Astronomical Journal*, 166, 49. [\[ADS\]](#).
54. Blunt, S., Carvalho, A., David, T. J., and 23 colleagues 2023, “Overfitting Affects the Reliability of Radial Velocity Mass Estimates of the V1298 Tau Planets”, *The Astronomical Journal*, 166, 62. [\[ADS\]](#).
55. Zink, J. K., Hardegree-Ullman, K. K., Christiansen, J. L., and 13 colleagues 2023, “Scaling K2. VI. Reduced Small-planet Occurrence in High-galactic-amplitude Stars”, *The Astronomical Journal*, 165, 262. [\[ADS\]](#).

56. Sullivan, K., Kraus, A. L., Huber, D., and 7 colleagues 2023, “Revising Properties of Planet-Host Binary Systems. III. There Is No Observed Radius Gap for Kepler Planets in Binary Star Systems”, *The Astronomical Journal*, 165, 177. [ADS].
57. El Moutamid, M., Stevenson, K. B., Quarles, B., and 7 colleagues 2023, “Mass derivation of planets K2-21b and K2-21c from transit timing variations”, *Monthly Notices of the Royal Astronomical Society*, 520, 4226. [ADS].
58. Dai, F., Masuda, K., Beard, C., and 60 colleagues 2023, “TOI-1136 is a Young, Coplanar, Aligned Planetary System in a Pristine Resonant Chain”, *The Astronomical Journal*, 165, 33. [ADS].
59. El Mufti, M., Plavchan, P. P., Isaacson, H., and 93 colleagues 2023, “TOI 560: Two Transiting Planets Orbiting a K Dwarf Validated with iSHELL, PFS, and HIRES RVs”, *The Astronomical Journal*, 165, 10. [ADS].
60. Bouma, L. G., Kerr, R., Curtis, J. L., and 8 colleagues 2022, “Kepler and the Behemoth: Three Mini-Neptunes in a 40 Million Year Old Association”, *The Astronomical Journal*, 164, 215. [ADS].
61. Kreidberg, L., Mollière, P., Crossfield, I. J. M., and 27 colleagues 2022, “Tentative Evidence for Water Vapor in the Atmosphere of the Neptune-sized Exoplanet HD 106315c”, *The Astronomical Journal*, 164, 124. [ADS].
62. Rosenthal, L. J., Knutson, H. A., Chachan, Y., and 11 colleagues 2022, “The California Legacy Survey. III. On the Shoulders of (Some) Giants: The Relationship between Inner Small Planets and Outer Massive Planets”, *The Astrophysical Journal Supplement Series*, 262, 1. [ADS].
63. Turtelboom, E. V., Weiss, L. M., Dressing, C. D., and 78 colleagues 2022, “The TESS-Keck Survey. XI. Mass Measurements for Four Transiting Sub-Neptunes Orbiting K Dwarf TOI-1246”, *The Astronomical Journal*, 163, 293. [ADS].
64. Christiansen, J. L., Bhure, S., Zink, J. K., and 39 colleagues 2022, “Scaling K2. V. Statistical Validation of 60 New Exoplanets From K2 Campaigns 2-18”, *The Astronomical Journal*, 163, 244. [ADS].
65. Chontos, A., Murphy, J. M. A., MacDougall, M. G., and 62 colleagues 2022, “The TESS-Keck Survey: Science Goals and Target Selection”, *The Astronomical Journal*, 163, 297. [ADS].
66. Hurt, S. A., Fulton, B., Isaacson, H., and 4 colleagues 2022, “Confirmation of the Long-period Planet Orbiting Gliese 411 and the Detection of a New Planet Candidate”, *The Astronomical Journal*, 163, 218. [ADS].
67. Winters, J. G., Cloutier, R., Medina, A. A., and 79 colleagues 2022, “A Second Planet Transiting LTT 1445A and a Determination of the Masses of Both Worlds”, *The Astronomical Journal*, 163, 168. [ADS].
68. Dalba, P. A., Kane, S. R., Dragomir, D., and 72 colleagues 2022, “The TESS-Keck Survey. VIII. Confirmation of a Transiting Giant Planet on an Eccentric 261 Day Orbit with the Automated Planet Finder Telescope”, *The Astronomical Journal*, 163, 61. [ADS].
69. Giacalone, S., Dressing, C. D., Hedges, C., and 108 colleagues 2022, “Validation of 13 Hot and Potentially Terrestrial TESS Planets”, *The Astronomical Journal*, 163, 99. [ADS].
70. Lubin, J., Van Zandt, J., Holcomb, R., and 33 colleagues 2022, “TESS-Keck Survey. IX. Masses of Three Sub-Neptunes Orbiting HD 191939 and the Discovery of a Warm Jovian plus a Distant Substellar Companion”, *The Astronomical Journal*, 163, 101. [ADS].
71. Heidari, N., Boisse, I., Orell-Miquel, J., and 90 colleagues 2022, “HD 207897 b: A dense sub-Neptune transiting a nearby and bright K-type star”, *Astronomy and Astrophysics*, 658, A176. [ADS].
72. Zink, J. K., Hardegree-Ullman, K. K., Christiansen, J. L., and 6 colleagues 2021, “Scaling K2. IV. A Uniform Planet Sample for Campaigns 1-8 and 10-18”, *The Astronomical Journal*, 162, 259. [ADS].
73. Akana Murphy, J. M., Kosiarek, M. R., Batalha, N. M., and 10 colleagues 2021, “Another Superdense Sub-Neptune in K2-182 b and Refined Mass Measurements for K2-199 b and c”, *The Astronomical Journal*, 162, 294. [ADS].



74. Polanski, A. S., Crossfield, I. J. M., Burt, J. A., and 35 colleagues 2021, “Wolf 503 b: Characterization of a Sub-Neptune Orbiting a Metal-poor K Dwarf”, *The Astronomical Journal*, 162, 238. [\[ADS\]](#).
75. Scarsdale, N., Murphy, J. M. A., Batalha, N. M., and 55 colleagues 2021, “TESS-Keck Survey. V. Twin Sub-Neptunes Transiting the Nearby G Star HD 63935”, *The Astronomical Journal*, 162, 215. [\[ADS\]](#).
76. Dalba, P. A., Kane, S. R., Li, Z., and 13 colleagues 2021, “Giant Outer Transiting Exoplanet Mass (GOT ‘EM) Survey. II. Discovery of a Failed Hot Jupiter on a 2.7 Yr, Highly Eccentric Orbit”, *The Astronomical Journal*, 162, 154. [\[ADS\]](#).
77. Osborn, A., Armstrong, D. J., Cale, B., and 125 colleagues 2021, “TOI-431/HIP 26013: a super-Earth and a sub-Neptune transiting a bright, early K dwarf, with a third RV planet”, *Monthly Notices of the Royal Astronomical Society*, 507, 2782. [\[ADS\]](#).
78. Zhang, J., Weiss, L. M., Huber, D., and 10 colleagues 2021, “Long-period Jovian Tilts the Orbits of Two sub-Neptunes Relative to Stellar Spin Axis in Kepler-129”, *The Astronomical Journal*, 162, 89. [\[ADS\]](#).
79. Dai, F., Howard, A. W., Batalha, N. M., and 48 colleagues 2021, “TKS X: Confirmation of TOI-1444b and a Comparative Analysis of the Ultra-short-period Planets with Hot Neptunes”, *The Astronomical Journal*, 162, 62. [\[ADS\]](#).
80. Fulton, B. J., Rosenthal, L. J., Hirsch, L. A., and 20 colleagues 2021, “California Legacy Survey. II. Occurrence of Giant Planets beyond the Ice Line”, *The Astrophysical Journal Supplement Series*, 255, 14. [\[ADS\]](#).
81. Rosenthal, L. J., Fulton, B. J., Hirsch, L. A., and 20 colleagues 2021, “The California Legacy Survey. I. A Catalog of 178 Planets from Precision Radial Velocity Monitoring of 719 Nearby Stars over Three Decades”, *The Astrophysical Journal Supplement Series*, 255, 8. [\[ADS\]](#).
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