

SHREYAS VISSAPRAGADA

Carnegie Science Observatories, 813 Santa Barbara Street, Pasadena, CA 91101, USA
svissapragada@carnegiescience.edu

APPOINTMENTS:

George Ellery Hale Distinguished Scholar, Carnegie Science Observatories, Pasadena, CA	2024 – current
51 Pegasi b Postdoctoral Fellow, Harvard University, Cambridge, MA	2022 – 2024
Graduate Research Fellow, California Institute of Technology, Pasadena, CA	2017 – 2022

EDUCATION:

Ph.D., Planetary Science, California Institute of Technology	2017 – 2022
Thesis: “The Irradiation-Driven Evolution of Gas-Giant Exoplanets”	
Advisor: Heather Knutson	
M.S., Planetary Science, California Institute of Technology	2017 – 2019
B.A. (<i>magna cum laude</i>), Astrophysics, Columbia University	2013 – 2017
Advisors: Catherine Walsh and Daniel Wolf Savin	

AWARDS:

Forbes 30 Under 30	2026
51 Pegasi b Fellowship	2022 – 2024
NSF Graduate Research Fellowship	2019 – 2022
Paul & Daisy Soros Fellowship	2019 – 2021
Barry M. Goldwater Scholarship	2016 – 2017
USRA James B. Willett Educational Memorial Scholarship	2016 – 2017

MENTORING:

Postdoctoral Fellows: Ava Morrissey, Jack Lubin (incoming), Morgan Saidel (incoming)

Graduate Students: Michael Greklek-McKeon (2019 – 2022), Morgan Saidel (2021 – 2026), Jea Adams Redai (2022 – 2024), W. Garrett Levine (2023 – 2025), Collin Cherubim (2024 – 2026), Chris Wang (incoming) Theodore Chawla (incoming)

Undergraduate Students: Roshni Bhaskar (2016 – 2017), Kim Paragas (2020 – 2021), Jorge Perez Gonzalez (2022 – 2023), Stephanie Yoshida (2022 – 2023), Sureena Lakhnapal (2025 –)

High School Students: Haedam Im (2020 – 2022), Kiki Sileshi (2022 – 2023), Katerina Triantafyllou (2022 – 2023), Mekeyas Mekuria (2022 – 2023)

SELECTED TALKS:

International Conference on Exoplanets and Planet Formation, Tsung-Dao Lee Institute	2025
SPI-MAX Seminar, University of Oxford	2025
The Fate of Neptunian Worlds Workshop, University of Warwick	2025
Exoclimates VII, Université de Montréal	2025
Magellan Science Meeting, Carnegie Earth & Planets Lab	2025
Kavli Colloquium, MIT	2025
Exoplanet Lunch Seminar, Princeton University	2024
CfA Seminar, Center for Astrophysics Harvard & Smithsonian	2024
Exoplanets 5 Meeting, Leiden NL	2024
Extreme Solar Systems V Meeting, Christchurch NZ	2024
Center for Exoplanets and Habitable Worlds Seminar, Penn State	2024
Astronomy Colloquium, Wesleyan University	2023
Five College Astronomy Department Colloquium, University of Massachusetts Amherst	2023
Astronomy Colloquium, University of Florida	2023

OBSERVING EXPERIENCE:

PI or active Co-I on programs using *JWST* (NIRSpec, NIRISS), *HST* (STIS, WFC3), Palomar (WIRC, PARVI, CHIMERA), Keck (NIRSPEC, KPF), Magellan (WINERED, MIKE, PFS), Gemini-N (MAROON-X), TNG (HARPS-N), FLWO (TRES), MMT (Hectochelle), WIYN (NEID), LCOGT, *XMM-Newton*, *Swift*, and ALMA.

TEACHING: [all are Teaching Assistant positions]

Caltech Planetary Science Department:	2019 - 2020
Planet Formation and Evolution, Planetary Physics	
Columbia University Computer Science Department:	2016
Introduction to Computing (Python); Discrete Mathematics	
Columbia University Astronomy Department:	2015 - 2016
Earth, Moon, and Planets; Stars and Atoms; Life in the Universe; Stars, Galaxies, and Cosmology	

SERVICE:

Postdoctoral Fellowships Committee Member at Carnegie Science Observatories	2024 – current
Graduate Student Evaluation Committee for USC-Carnegie Program	2024 – current
Carnegie Science Observatories Outreach Volunteer	2024 – current
TAC Member / Panelist for <i>JWST</i> , NN-EXPLORE, Magellan, NASA	2022 – current
Reviewer for AAS Journals, A&A, MNRAS, Nature, Nature Astronomy	2021 – current
Exoplanet Pizza Lunch Seminar Organizer at Harvard/CfA	2023 – 2024
Science Research Mentoring Program Mentor at Harvard/CfA	2022 – 2023
Skype a Scientist Volunteer	2018 – 2022
Caltech FUTURE and FUTURE Ignited Volunteer	2019 – 2022
Caltech Astronomy Department Outreach Volunteer	2018 – 2022
Teaching Assistant at Columbia University and Caltech	2015 – 2020
Dix Planetary Science Seminar Organizer	2019 – 2020
Caltech Graduate Student Council Secretary + Member of Advocacy and Diversity Committees	2018 – 2020

MAJOR GRANTS: [total secured: \$1,681,483; total to Vissapragada: \$1,209,888]

<i>Hubble Space Telescope</i> , GO 17997	2026 – current
<i>STELα: Survey of Transiting Exoplanets in Lyman-α</i>	
PIs: Parke Loyd and Shreyas Vissapragada	
 Mt. Cuba Astronomical Foundation	2025 – current
<i>Adapting the WINERED Spectrograph for Exoplanet Transit Observations</i>	
PI: Shreyas Vissapragada	
 U.S. Contributions to Ariel Preparatory Science (US-CAPS)	2025 – current
<i>Neptunes Near and Far: Maximizing Ariel's Sub-Jovian Science Yield with Precise Radial Velocities</i>	
PI: Shreyas Vissapragada	
 <i>Hubble Space Telescope</i> , GO 17920	2025 – current
<i>Constraining Composition, Clouds, and Hazes in a Long-Period Giant Planet</i>	
PIs: Shreyas Vissapragada and Nicole Wallack	
 <i>Hubble Space Telescope</i> , GO 17804	2024 – current
<i>STELα: Survey of Transiting Exoplanets in Lyman-α</i>	
PIs: Parke Loyd and Shreyas Vissapragada	
 Heising-Simons Foundation	2024 – current
<i>51 Pegasi b Alumni Regrant</i>	
PI: Shreyas Vissapragada	
 <i>Hubble Space Telescope</i> , GO 17600	2024 – current
<i>The Exosphere of a Venus-Like Exoplanet</i>	
PI: Shreyas Vissapragada	
 <i>James Webb Space Telescope</i> , AR 5716	2024 – current
<i>TUNES: The Unintentional NIRISS Escape Survey</i>	
PI: Shreyas Vissapragada	

PUBLICATIONS: [First author: 10; second/third author: 18; n th author: 24]

(+) indicates student that I directly advised or co-advised

1. J. T. Roth et al. 2026, “The T16 Planet Hunt: 10,000 New Planet Candidates from TESS Cycle 1 and the Confirmation of a Hot Jupiter around TIC 183374187,” *The Astrophysical Journal Supplement Series*, 284, 19
2. S. W. Yee, **S. Vissapragada** et al. 2026, ““Popcorn Planets” Are Not Actively Inflated by Eccentricity Tides,” *The Astrophysical Journal Letters*, 1000, L54
3. M. Sidel (+), **S. Vissapragada** et al. 2026, “The First Dedicated Survey of Atmospheric Escape from Planets Orbiting F Stars,” *The Astronomical Journal*, 171, 257
4. G. Mantovan et al. 2026, “A tidally detached super Neptune on a strongly misaligned retrograde orbit,” in review, arXiv:2604.19179
5. X. Dumusque et al. 2026, “A decade of solar high-fidelity spectroscopy and precise radial velocities from HARPS-N,” *Astronomy & Astrophysics*, 706, A231
6. J. I. Espinoza-Retamal et al. 2026, “POSEIDON I: The Dynamical Origins of Transiting Neptunes,” in review, arXiv:2602.18553
7. D. A. Turner et al. 2026, “The mass of the exo-Venus Gliese 12 b, as revealed by HARPS-N, ESPRESSO, and CARMENES,” *Monthly Notices of the Royal Astronomical Society*, 545, staf1703
8. H. Im et al. 2025, “Kepler-1624b Has No Significant Transit Timing Variations,” *The Astronomical Journal*, 170, 336
9. C. Gascón, M. López-Morales, **S. Vissapragada** et al. 2025, “Modeling Tails of Escaping Gas in Exoplanet Atmospheres with Harmonica,” *The Astrophysical Journal Letters*, 991, L47
10. M. Sidel (+), **S. Vissapragada** et al. 2025, “Stringent Upper Bounds on Atmospheric Mass Loss from Three Neptune-sized Planets in the TOI-4010 System,” *The Astronomical Journal*, 170, 247
11. F. Manni et al. 2025, “The Hot Neptune Initiative (HONEI): II. TOI-5795 b: A hot super-Neptune orbiting a metal-poor star,” *Astronomy & Astrophysics*, 701, A230
12. L. Naponiello, **S. Vissapragada** et al. 2025, “The Hot-Neptune Initiative (HONEI): I. Two hot sub-Neptunes on a close-in eccentric orbit (TOI-5800 b) and a farther-out circular orbit (TOI-5817 b),” *Astronomy & Astrophysics*, 701, A79
13. J. Gomez Barrientos et al. 2025, “Validation of TESS Planet Candidates with Multicolor Transit Photometry and TRICERATOPS+,” *The Astronomical Journal*, 170, 148
14. V. DiTomasso et al. 2025, “The HD 60779 Planetary System: A Transiting Sub-Neptune on a 30-day Orbit and a More Massive Outer World,” in review, arXiv:2508.16805
15. L. A. Dos Santos et al. 2025, “Exoplanet Atmospheric Escape Observations with the Habitable Worlds Observatory,” in review, arXiv:2507.07124
16. M. Greklek-McKeon (+), **S. Vissapragada** et al. 2025, “Tidally Heated Sub-Neptunes, Refined Planetary Compositions, and Confirmation of a Third Planet in the TOI-1266 System,” *The Astronomical Journal*, 169, 292
17. **S. Vissapragada** et al. 2025, “The Hottest Neptunes Orbit Metal-rich Stars,” *The Astronomical Journal*, 169, 117
18. M. Sidel (+), **S. Vissapragada** et al. 2025, “Atmospheric Mass Loss from TOI-1259 A b, a Gas Giant Planet with a White Dwarf Companion,” *The Astronomical Journal*, 169, 104
19. K. Masuda et al. 2024, “A Fourth Planet in the Kepler-51 System Revealed by Transit Timing Variations,” *The Astronomical Journal*, 168, 294
20. W. G. Levine (+), **S. Vissapragada** et al. 2024, “Exoplanet Aeronomy: A Case Study of WASP-69 b’s Variable Thermosphere,” *The Astronomical Journal*, 168, 65

21. S. K. Grunblatt et al. 2024, “TESS Giants Transiting Giants. IV. A Low-density Hot Neptune Orbiting a Red Giant Star,” *The Astronomical Journal*, 168, 1
22. J. Pérez-González (+), M. Greklek-McKeon (+), **S. Vissapragada** et al. 2024, “Detection of an Atmospheric Outflow from the Young Hot Saturn TOI-1268b,” *The Astronomical Journal*, 167, 214
23. **S. Vissapragada** et al. 2024, “Helium in the Extended Atmosphere of the Warm Superpuff TOI-1420b,” *The Astronomical Journal*, 167, 199
24. L. Palethorpe et al. 2024, “Confronting compositional confusion through the characterization of the sub-Neptune orbiting HD 77946,” *Monthly Notices of the Royal Astronomical Society*, 529, 3323-3341
25. **S. Vissapragada** et al. 2024, “A High-resolution Non-detection of Escaping Helium in the Ultrahot Neptune LTT 9779b: Evidence for Weakened Evaporation,” *The Astrophysical Journal Letters*, 962, L19
26. R. Cloutier et al. 2024, “Masses, revised radii, and a third planet candidate in the ‘Inverted’ planetary system around TOI-1266,” *Monthly Notices of the Royal Astronomical Society*, 527, 5464-5483
27. S. Yoshida (+), **S. Vissapragada** et al. 2023, “TESS Spots a Super-puff: The Remarkably Low Density of TOI-1420b,” *The Astronomical Journal*, 166, 181
28. A. Bello-Arufe et al. 2023, “Transmission Spectroscopy of the Lowest-density Gas Giant: Metals and a Potential Extended Outflow in HAT-P-67b,” *The Astronomical Journal*, 166, 69
29. L. A. Dos Santos et al. 2023, “Observing Atmospheric Escape in Sub-Jovian Worlds with JWST,” *The Astronomical Journal*, 165, 244
30. M. Greklek-McKeon (+), H. A. Knutson, **S. Vissapragada** et al. 2023, “Constraining the Densities of the Three Kepler-289 Planets with Transit Timing Variations,” *The Astronomical Journal*, 165, 48
31. F. Dai et al. 2023, “TOI-1136 is a Young, Coplanar, Aligned Planetary System in a Pristine Resonant Chain,” *The Astronomical Journal*, 165, 33
32. **S. Vissapragada** et al. 2022, “The Possible Tidal Demise of Kepler’s First Planetary System,” *The Astrophysical Journal Letters*, 941, L31
33. **S. Vissapragada** et al. 2022, “The Upper Edge of the Neptune Desert Is Stable Against Photoevaporation,” *The Astronomical Journal*, 164, 234
34. J. J. Spake et al. 2022, “Non-detection of He I in the Atmosphere of GJ 1214b with Keck/NIRSPEC, at a Time of Minimal Telluric Contamination,” *The Astrophysical Journal Letters*, 939, L11
35. Q. Zhang et al. 2022, “Dust Evolution in the Coma of Distant, Inbound Comet C/2017 K2 (PANSTARRS),” *The Planetary Science Journal*, 3, 135
36. I. Wong, A. Shporer, **S. Vissapragada** et al. 2022, “TESS Revisits WASP-12: Updated Orbital Decay Rate and Constraints on Atmospheric Variability,” *The Astronomical Journal*, 163, 175
37. **S. Vissapragada** et al. 2022, “The Maximum Mass-loss Efficiency for a Photoionization-driven Isothermal Parker Wind,” *The Astrophysical Journal*, 927, 96
38. L. A. Dos Santos, A. A. Vidotto, **S. Vissapragada** et al. 2022, “p-winds: An open-source Python code to model planetary outflows and upper atmospheres,” *Astronomy & Astrophysics*, 659, A62
39. L. Kaye, **S. Vissapragada** et al. 2022, “Transit timings variations in the three-planet system: TOI-270,” *Monthly Notices of the Royal Astronomical Society*, 510, 5464-5485
40. I. Wong et al. 2021, “TOI-2109: An Ultrahot Gas Giant on a 16 hr Orbit,” *The Astronomical Journal*, 162, 256
41. **S. Vissapragada** et al. 2021, “A Search for Planetary Metastable Helium Absorption in the V1298 Tau System,” *The Astronomical Journal*, 162, 222
42. Q. Zhang, Q. Ye, **S. Vissapragada** et al. 2021, “Preview of Comet C/2021 A1 (Leonard) and Its Encounter with Venus,” *The Astronomical Journal*, 162, 194

43. K. Paragas (+), **S. Vissapragada** et al. 2021, “Metastable Helium Reveals an Extended Atmosphere for the Gas Giant HAT-P-18b,” *The Astrophysical Journal Letters*, 909, L10
44. **S. Vissapragada** et al. 2020, “Constraints on Metastable Helium in the Atmospheres of WASP-69b and WASP-52b with Ultranarrowband Photometry,” *The Astronomical Journal*, 159, 278
45. A. L. Piro, **S. Vissapragada** et al. 2020, “Exploring Whether Super-puffs can be Explained as Ringed Exoplanets,” *The Astronomical Journal*, 159, 131
46. **S. Vissapragada** et al. 2020, “Diffuser-assisted Infrared Transit Photometry for Four Dynamically Interacting Kepler Systems,” *The Astronomical Journal*, 159, 108
47. S. W. Yee et al. 2020, “The Orbit of WASP-12b Is Decaying,” *The Astrophysical Journal Letters*, 888, L5
48. S. Tinianont et al. 2019, “WIRC+Pol: A Low-resolution Near-infrared Spectropolarimeter,” *Publications of the Astronomical Society of the Pacific*, 131, 025001
49. N. Ligterink et al. 2018, “Methanol ice co-desorption as a mechanism to explain cold methanol in the gas-phase,” *Astronomy & Astrophysics*, 612, A88
50. D. W. Savin, R. Bhaskar (+), **S. Vissapragada**, & X. Urbain 2017, “On the Energetics of the $\text{HCO}^+ + \text{C} \rightarrow \text{CH}^+ + \text{CO}$ Reaction and Some Astrochemical Implications,” *The Astrophysical Journal*, 844, 154
51. **S. Vissapragada** et al. 2016, “Recommended Thermal Rate Coefficients for the $\text{C} + \text{H}_3^+$ Reaction and Some Astrochemical Implications,” *The Astrophysical Journal*, 832, 31
52. N. de Ruette et al. 2016, “Merged-beams Reaction Studies of $\text{O} + \text{H}_3^+$,” *The Astrophysical Journal*, 816, 31