

# Sean K. Terry

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PERSONAL	Department of Astronomy 501 Campbell Hall #3411 Berkeley, CA 94720	Email: sean.terry@berkeley.edu Github: skterry <a href="http://w.astro.berkeley.edu/~sean.terry">http://w.astro.berkeley.edu/~sean.terry</a>
APPOINTMENTS	<b>Postdoctoral Scholar</b> , University of California, Berkeley	November 2020 – Present
EDUCATION	<b>The Catholic University of America</b> , Ph.D., Physics <b>The Catholic University of America</b> , M.S., Physics <b>George Mason University</b> , B.S., Astronomy/Physics <b>Northern Virginia Community College</b> , A.S., Gen. Science	2020 2018 2015 2012
RESEARCH AREAS	Gravitational microlensing by exoplanets Astrometric microlensing Galactic bulge stellar kinematics and populations Computational astrophysics Adaptive optics	
SERVICE & PROFESSIONAL ACTIVITIES	<b>Professional Activities</b> Project Science Team – Keck All-Sky Precision Adaptive Optics (KAPA) Representative – Annual GSFC Administrator’s Congressional Visits Local Organizing Committee – 19th International Conference on Microlensing  <b>Professional Memberships</b> Member – American Astronomical Society (AAS) Member – Society for Personality and Social Psychology (SPSP) Member – Seers Exoplanet Environments Collaboration (SEEC)  <b>Panels and Reviews</b> <i>TESS</i> Cycle 4	2020–present 2016 2015  2015–present 2017–2020 2016–2020  2021
TEACHING EXPERIENCE	Guest Lecturer (American U.), <i>Complex Problems Seminar: Exoplanets in Fact &amp; Fiction</i> Teaching Assistant (GMU), <i>Astronomy for non-STEM Majors</i> Teaching Assistant (GMU), <i>Introduction to Astrophysics</i>	2019 2014 2013
MENTORING	<b>NASA Goddard Summer Interns</b> Ishaan Gandhi – current: Harvey Mudd College Anshula Gandhi – MIT (graduated) Mackenzie Kynoch – Dartmouth (graduated)	2016 2015 2015
OUTREACH	Guest Speaker, STEM-Day, Garfield High School, Woodbridge, VA CUA Booth, Annual Astronomy Festival on the Mall, Washington, DC Proctor, GMU Public Observing Nights, Fairfax, VA	2017 2015–2017 2013–2015

GRANTS  
AWARDED

Hubble Space Telescope Cycle 28 Grant #16509

*“Detection of the Astrometric Microlensing Signal by the Binary Black Hole Candidate MOA-2019-BLG-284”*

Principle Investigator: S. K. Terry

March 9, 2021 – November 31, 2021

Keck Semester 2021A

*“Testing Core Accretion with Microlens Planet Host Star Masses”*

Principle Investigator: D. P. Bennett

May 17, 2021 – July 13, 2021

## OBSERVING

HST (WFC3/UVIS), 4 orbits

2021

Keck 10m (NIRC2/OSIRIS), 8 nights

2019–2021

GMU 0.8m, 24 nights

2013–2015

TALKS &  
PROCEEDINGS**12 talks (3 invited<sup>†</sup>, 9 public)**

12. <sup>†</sup> “A Sub-Saturn Exoplanet Inside the Mass Desert Predicted by Core Accretion”, University of Maryland, November 2020
11. “Roman Space Telescope Mass-measurement Method Determines a Mass of  $66 \pm 8M_{\oplus}$  for MOA-2009-BLG-319Lb”, Chesapeake Bay Area Exoplanet Meeting (chExo) #8, June 2020
10. <sup>†</sup> “Comparing HST Observations of Bulge Stars to Galactic Population Synthesis Models in Preparation for the WFIRST Microlensing Survey”, NASA GSFC, November 2019
9. <sup>†</sup> “Probing the Galactic Bulge Stellar Population as Precursor Science for WFIRST”, University of Maryland, May 2018
8. “Preparing for the WFIRST Microlensing Survey: Stellar Populations in the Galactic Bulge”, George Mason University, November 2017
7. “Precursor Science for the WFIRST Mission”, Sagan Exoplanet Summer Workshop, Caltech, August 2017
6. “A Deep Study of the Stanek Field as Precursor Science for the WFIRST Microlensing Field of Regard”, George Washington University, July 2017
5. “Bayesian Modeling of Gravitational Microlensing Events”, George Washington University, June 2016
4. “A New Toolkit for Modeling Gravitational Microlensing Events”, The College of William & Mary, March 2016
3. “Exoplanet Detection with WFIRST”, The Catholic University of America, July 2015
2. “A New Near-IR Luminosity Function in the WFIRST Microlensing Fields”, 19th International Conference on Gravitational Microlensing, January 2015
1. “Light Curve Analysis of HD 189733b, WASP-33b and KELT-1b”, George Mason University, November 2013

## PUBLICATIONS

**10 total (5 first author)**<sup>†</sup> = unrefereed publications

10. **Terry, S. K.**, Bhattacharya, A., Bennett, D. P., Bond, I.A., et al. “Using Keck Adaptive Optics to Break the Degeneracies for OGLE-2011-BLG-0950”, 2021, *in prep*
9. Bhattacharya, A., Bennett, D. P., Beaulieu, J., & 11 coauthors including **Terry, S. K.**, “MOA-2007-BLG-400Lb: A Super-Jupiter Mass Planet Orbiting a Galactic Bulge K-dwarf Revealed by Keck Adaptive Optics Imaging”, 2021, *submitted to AJ*
8. Blackman, J., Beaulieu, J., Bennett, D. P., & 11 coauthors including **Terry, S. K.**, “A Planetary Survivor of Its Host Star’s Demise”, 2021, *submitted to Nature*
7. <sup>†</sup>**Terry, S. K.**, “Breaking a New Degeneracy in High Magnification Microlensing Events”, 2021, *American Astronomical Society*, 237, 218.03
6. **Terry, S. K.**, Bhattacharya, A., Bennett, D. P., Bond, I.A., et al. “MOA-2009-BLG-319Lb: A Sub-Saturn Planet Inside the Predicted Mass Desert”, 2021, *AJ*, 161, 54
5. **Terry, S. K.**, Barry, R. K., Bennett, D. P., Bhattacharya, A., Anderson, J., Penny, M. T., “Comparing Observed Stellar Kinematics and Surface Densities in a Low Latitude Bulge Field to Galactic Population Synthesis Models”, 2020, *ApJ*, 889, 126
4. Bennett, D. P., Bhattacharya, A., Beaulieu, J., & 9 coauthors including **Terry, S. K.**, “Keck Observations Confirm a Super-Jupiter Planet Orbiting M-dwarf OGLE-2005-BLG-071L”, 2020, *AJ*, 159, 68
3. <sup>†</sup>**Terry, S. K.**, “Direct Mass Measurements for Planets Discovered by Gravitational Microlensing”, 2020, *American Astronomical Society*, 235, 402.01
2. Bennett, D. P., Bhattacharya, A., Anderson, J., & 15 coauthors including **Terry, S. K.**, “Confirmation of the Planetary Microlensing Signal and Star and Planet Mass Determinations for Event OGLE-2005-BLG-169”, 2015, *ApJ*, 808, 169
1. <sup>†</sup>Gilbert, E., **Terry, S. K.**, Pfeifle, R., “A New Luminosity Function for Stars in the Galactic Bulge”, 2015, *American Astronomical Society*, 225, 102.02

## SKILLS

Python, Fortran, IDL, gnu, Git, Bash

## REFERENCES

Available upon request.