Jared Siegel

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Education

Princeton University — Expected 2027

PhD in Astrophysics

University of Chicago — 2022

BA in Physics
BS in Astrophysics

Awards and Grants

NSF Graduate Research Fellowship | *National Science Foundation* — 2022

Centennial Fellowship | *Princeton University* — 2022

Chambliss Astronomy Student Award | *American Astronomical Society* — 2020

Peer Reviewed Publications

First Author .....

13. **Siegel, J.**, et al. *The suppression of the matter power spectrum: strong feedback from X-ray gas mass fractions, kSZ effect profiles, and galaxy-galaxy lensing*, submitted to The Monthly Notices of the Royal Astronomical Society, arXiv:2512.02954

12. **Siegel, J.**, Amon A., et al. *Joint X-ray, kinetic Sunyaev-Zeldovich, and weak lensing measurements: toward a consensus picture of efficient gas expulsion from groups and clusters*, submitted to The Astrophysical Journal, arXiv:2509.10455

11. **Siegel, J.**, McCullough, J., Amon A., et al. *Intrinsic alignment demographics for next-generation lensing: Revealing galaxy property trends with DESI Y1 direct measurements*, submitted to The Monthly Notices of the Royal Astronomical Society, arXiv:2507.11530

10. **Siegel, J.**, & Melchior, P. *Spatially Resolved Galaxy-Dust Modeling with Coupled Data-Driven Priors*, The Astrophysical Journal, 986, 212 (2025)

9. **Siegel, J.**, Setton, D., Greene, J., et al. *UNCOVER: Significant Reddening in Cosmic Noon Quiescent Galaxies*, The Astrophysical Journal, 985, 125 (2025)

8. **Siegel, J.**, Halverson, S., Luhn, J., Zhao, L., Al Moulla, K., et al. *Quiet Please: Detrending Radial Velocity Variations from Stellar Activity with a Physically Motivated Spot Model*, The Astronomical Journal, 168, 158 (2024)

7. **Siegel, J.**, Kiato, I., Kalogera, V., Berry, C., Maccarone, T., et al. *Investigating the Lower Mass Gap with Low Mass X-ray Binary Population Synthesis*, The Astrophysical Journal, 952, 212 (2023)

6. **Siegel, J.**, Winn, J., Albrecht, S., *Ponderings on the Possible Preponderance of Perpendicular Planets*, The Astrophysical Journal Letters, 950, 1 (2023)

5. **Siegel, J.**, & Rogers, L., *Mass Upper Bounds for Over 50 Kepler Planets Using Low-S/N Transit Timing Variations*, The Astronomical Journal, 164, 139 (2022)

4. **Siegel, J.**, Rubenzahl, R., Halverson, S., & Howard, A., *Into the Depths: a new activity metric for high-precision radial velocity measurements based on line depth variations*, The Astronomical Journal, 163, 260 (2022)

3. **Siegel, J.**, Dwarkadas, V. V., Frank, K. A., & Burrows, D. N., *Can the Fe K-alpha line reliably predict supernova remnant progenitors?*, The Astrophysical Journal, 922, 67 (2021)

2. **Siegel J.**, & Fabrycky, D., *Resonant Chains of Exoplanets: Libration Centers for Laplace Angles*, The Astronomical Journal, 161, 290 (2021)

1. **Siegel, J.**, Dwarkadas, V. V., Frank, K., & Burrows, D. N., *Analysis of XMM-Newton Observations of Supernova Remnant W49B and Clues to the Progenitor*, The Astrophysical Journal, 904, 175 (2020)

Contributing Author .....

2. Bigwood L., McCullough J., **Siegel, J.**, et al., *Confronting cosmic shear astrophysical uncertainties: DES Year 3 revisited*, in review

1. Bigwood L., Yamamoto M., **Siegel, J.**, et al., *The kinetic Sunyaev Zeldovich effect as a benchmark for AGN feedback models in hydrodynamical simulations: insights from DESI + ACT*, submitted to The Monthly Notices of the Royal Astronomical Society, arXiv:2510.15822

Outreach and Service

Course Coordinator—Princeton Prison Teaching Initiative — Spring 2025—Present

AST 207 | A Gateway to Science — East Jersey State Prison

Teaching

Teaching assistant—Princeton University, Dept. of Astrophysical Sciences — 2023—Present

AST 205 | Planets in the Universe
AST 207 | A Gateway to Science: Observational Astronomy in the James Webb Era
APC 524 | Software Engineering for Scientific Computing

Teaching assistant—University of Chicago, Dept. of A. & A. — 2020—2021

ASTR 211 | Computational Techniques in Astrophysics
ASTR 205 | Intro. to Python Programming with Applications to Astro Statistics