

Grant C. Weldon

UCLA Department of Physics & Astronomy
Division of Astronomy & Astrophysics
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RESEARCH INTERESTS Celestial mechanics, exoplanet architectures and demographics, planetary interiors, tidal disruption, accretion

EDUCATION **University of California, Los Angeles** 2023 - 2027 (expected)
Ph.D., Astronomy & Astrophysics
Advisors: Brad Hansen, Smadar Naoz

M.S., Astronomy & Astrophysics 2021 - 2023
Advisors: Tuan Do, Andrea Ghez

University of Michigan, Ann Arbor 2017 - 2021
B.S., Physics (with Highest Honors), Minors in Astronomy, Mathematics
Advisor: Keith Riles

RESEARCH APPOINTMENTS Hansen & Naoz Groups, UCLA 2023 - present
UCLA Galactic Center Group 2021 - 2023
NASA Goddard Gravitational Astrophysics Laboratory 2020
INFN-University of Rome Tor Vergata Gravitational Wave Group 2019
Michigan Gravitational Wave Group (LIGO) 2018 - 2021

AWARDS & HONORS NASA ExoExplorer 2025
Outstanding Teaching Award, UCLA Physics & Astronomy Department 2023
NSF Graduate Research Fellowship Honorable Mention 2021
Phi Beta Kappa, University of Michigan 2021
C. Wilbur Peters Service Award, University of Michigan Physics Department 2021
Shipman Scholarship, University of Michigan 2017 - 2021
(full-tuition merit scholarship to Michigan)

TEACHING Teaching Assistant, UCLA
· Astronomy 117: Extragalactic Astrophysics Spring 2023
· Astronomy 4: Black Holes & Cosmic Catastrophes Spring 2022
· Physics 5B: Thermodynamics, Fluids, Waves, Light, and Optics Winter 2022
· Astronomy 5: Life in the Universe Fall 2021

REFEREED PUBLICATIONS 7. **G. C. Weldon**, S. Naoz, B. M. S. Hansen, *The Cold Jupiter Eccentricity Distribution is Consistent with EKL Driven by Stellar Companions*, [ApJ Letters 980 L31](#) (2025)
6. **G. C. Weldon**, S. Naoz, B. M. S. Hansen, *Analytical Models for Secular Descents in Hierarchical Triple Systems*, [ApJ 974 302](#) (2024)
5. H. Pagnat et al. (incl. **G. C. Weldon**), *New Evidence for a Flux-independent Spectral Index of Sgr A* in the Near-infrared*, [ApJ 977 228](#) (2024)
4. **G. C. Weldon** et al., *Near-Infrared Flux Distribution of Sgr A* from 2005-2022: Evidence for an Enhanced Accretion Episode in 2019*, [ApJ Letters 954 L33](#) (2023)

3. R. Abbott et al. (incl. **G. C. Weldon**), *Search of the Early O3 LIGO Data for Continuous Gravitational Waves from the Cassiopeia A and Vela Jr. Supernova Remnants*, [Phys. Rev. D 105 082005](#) (2022)
2. R. Abbott et al. (incl. **G. C. Weldon**), *All-sky Search for Continuous Gravitational Waves from Isolated Neutron Stars in the Early O3 LIGO Data*, [Phys. Rev. D 104 082004](#) (2021)
1. B. P. Abbott et al. (incl. **G. C. Weldon**), *All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data*, [Phys. Rev. D 100 024004](#) (2019)

PRESENTATIONS

10. Talk: Division on Dynamical Astronomy Annual Meeting (2025), Georgia Tech, *The Stellar Eccentric Kozai-Lidov Mechanism as a Key Driver of Cold Jupiter Eccentricities*
9. Talk: Machine Learning in Planetary Dynamics Workshop (2025), Center for Computational Astrophysics, *Cold Jupiter eccentricities driven by the stellar Eccentric Kozai-Lidov mechanism*
8. Talk: NASA ExoExplorers Science Series (2025), Virtual, *The dynamical origins of giant planet eccentricities*
7. **Invited Talk:** Hebrew University Celestial Mechanics Seminar (2024), Virtual, *Analytical models for eccentric Kozai-Lidov migration in hierarchical triple systems*
6. Talk: Division on Dynamical Astronomy Annual Meeting (2024), University of Toronto, *Analytical models for eccentric Kozai-Lidov migration of Hot Jupiters*
5. Talk: Anticipating the Rising Tide of Tidal Disruption Events (2024), KITP, *A model for repeated tidal disruption events in supermassive black hole binaries*
4. Poster: Keck Science Meeting (2022), Caltech, *Near-Infrared Sgr A* Monitoring from 2005-2022: Diminished Activity Following Unprecedented Variability*
3. Talk: 5th Galactic Center Orbits Initiative Workshop (2021), UCLA, *Sgr A* Near-Infrared Variability as a Probe of Supermassive Black Hole Accretion*
2. Talk: Midwest Relativity Meeting (2019), Grand Valley State University, *Strain Histograms for Evaluating Continuous Gravitational Wave Candidates*
1. Talk: APS April Meeting (2019), Denver, CO, *Strain Histograms for Evaluating Continuous Gravitational Wave Candidates*

PUBLIC TALKS

3. UCLA Planetarium (2024), *Celebrating Asian American, Native Hawaiian, and Pacific Islander Heritage Month*
2. UCLA Planetarium (2022), *Seeing the Unseen: Finding Black Holes in the Universe*
1. UCLA Planetarium (2021), *The Monster at the Center of the Milky Way: A Tale of Black Holes, Big Telescopes, and the 2020 Nobel Prize*

MENTORSHIP

Julia Bonk, UCLA Undergraduate 2025 - present
 · Project: Dynamics of moderately hierarchical planetary systems

REVIEW

Executive Secretary, NASA Review Panel 2025
 Referee, Nature Astronomy 2025
 Referee, The Astrophysical Journal 2024 - 2025

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| SERVICE | Graduate Peer Mentor, UCLA | 2023 - present |
| | Outreach Coordinator, Astronomy Live!, UCLA | 2022 - present |
| | Society of Physics Students (SPS), University of Michigan | 2018 - 2021 |
| | · President (2020 - 2021) | |
| | · Vice President (2019 - 2020) | |
| | · Outreach Chair (2018 - 2019) | |
| | Volunteer Physics Teaching Assistant, Jalen Rose Leadership Academy | 2021 |
| OUTREACH | Volunteer, Letters to a Pre-Scientist | 2024 - present |
| | Planetarium Show Presenter, UCLA Planetarium | 2021 - present |
| | Outreach Volunteer, Exploring Your Universe Festival, UCLA | 2021 - present |
| | Panelist, STEM Without Boundaries Tech Series, Novi High School | 2020 |
| | Coordinator, SPS Biweekly Speaker Series | 2019 |
| | Leader/Volunteer, Michigan Science Center Physics Demo Day | 2018 - 2019 |
| | Leader/Volunteer, Ann Arbor Hands-On Museum Physics Palooza | 2018 - 2019 |
| | Outreach Volunteer, Burns Park Elementary School | 2018 |