Tyler Gordon

Astronomy Graduate Student

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Education

2023 (expected) **Ph.D. Astronomy** — Univeristy of Washington

2016–2018 **M.S. Astronomy** — University of Washington

2010–2015 **B.S. Physics, Applied Mathematics** — Boise State University

Research Experience

2016– **Graduate Research Assistant** — University of Washington

- Development of differentiable transit models, simulation of JWST observations, and development of a multi-wavelength Gaussian process framework for stellar noise modeling with **Eric Agol**
- Measuring stellar rotation in the K2 Sample with **James Davenport**

2012–2016 **Undergraduate Research Assistant** — Boise State University

- Simulating sychrotron self-Compton emissions from blazars with Daryl Macomb
- Molecular dynamics simulations of soft matter systems with Charles Hanna and David Pink

Grants, Awards, and Honors

2020 **Projectors for the UW Planetarium STF Grant**

- Awarded $75,520 to upgrade planetarium projectors

2021 **Graduate Student Teaching Award**

2016–2019 **ARCS Fellowship**

Teaching and Outreach

2018–2022 **Planetarium Coordinator** — University of Washington

- Scheduled planetarium shows, managed volunteers, and developed outreach programs for the UW campus planetarium

2017 – **AoT Seattle Co-organizer**

- Co-organized Astronomy on Tap Seattle, a popular public astronomy lecture series.

2021–2022 **AoT Seattle Lead Organizer**

- Lead Astronomy on Tap Seattle outreach events.

2016–2017 **Graduate Teaching Assistant** — University of Washington

- ASTR 101, ASTR 150, ASTR 270

2012–2015 **Undergraduate Teaching Assistant** — Boise State University

- PHYS 101, PHYS 102, PHYS 201, PHYS 202

Mentoring

2020 **Pre-MAP Mentor** — University of Washington
- Mentored two undergraduates for one quarter on a project related to stellar rotation

2021 – **Undergraduate Mentor** — University of Washington
- Co-mentored an undergraduate student on a project to measure stellar rotation periods in open clusters
- Mentored an undergraduate student on a project to analyze the information content of exomoon/planet mutual transit lightcurves.

publications

Gordon, T. A. & Agol, E. 2022 Analytic Light Curve for Mutual Transits of Two Bodies Across a Limb-darkened Star, AJ, 164, 111.

Gordon, T. A., Davenport, J. R. A., Angus, R., et al. 2021, Stellar Rotation in the K2 Sample: Evidence for Modified Spin-down, ApJ, 913, 70.

Gordon, T. A., Agol, E., & Foreman-Mackey, D. 2020, A Fast, Two-dimensional Gaussian Process Method Based on Celerite: Applications to Transiting Exoplanet Discovery and Characterization, AJ, 160, 240.

Foreman-Mackey, D., Luger, R., Agol, E., et al. (including **Gordon, T. A.**) 2021, exoplanet: Gradient-based probabilistic inference for exoplanet data & other astronomical time series, The Journal of Open Source Software, 6, 3285.

selected talks

Analytic Light Curve for Mutual Transits of Two Bodies Across a Limb-darkened Stars, AAS meeting 240, Pasadena, CA, June, 2022

The Search for Exomoons (invited), Boise State University, Boise, ID, December, 2021

Measuring Stellar Rotation in the K2 Sample, KITP Online Reunion Conference: Exostar Redux, Santa Barbara, CA, August, 2020

Measuring Stellar Rotation in the K2 Sample, AAS meeting 235, Honolulu, HI, January, 2020