Rodrigo Luger

Contact

Univ. of Washington · · · Department of Astronomy 3910 15th Ave NE · · · Seattle, WA 98195 – U.S.A. rodluger@uw.edu · · · staff.washington.edu/rodluger/

EDUCATION

University of Washington, Seattle, WA

2012 -

- · · · Astronomy/Astrobiology PhD Candidate
- · · · MSc Astronomy, December 2013

Swarthmore College, Swarthmore, PA

2006 - 2010

 $\cdots\,$ BA Astrophysics / English Literature minor, May 2010

American School of Campinas, Campinas, Brazil

2002 - 2006

RESEARCH EXPERIENCE Researcher, Virtual Planet Laboratory @ UW

2012 -

- · · · Research with Profs. Eric Agol, Rory Barnes, and Victoria Meadows
- \cdots Developing methods to de-trend K2 light curves and search for small potentially habitable transiting planets
- · · · Investigating the atmospheric evolution of planets in the habitable zone of M dwarfs

Student Researcher, Swarthmore College

2008 - 2009

 \cdots Research under Professor Eric Jensen on planet formation and T Tauri disks

SELECTED PUBLICATIONS

Luger, R., Sestovic, M., Kruse, E., et al. (2017) A seven-planet resonant chain in TRAPPIST-1. Nature Astronomy 1, 0129

Luger, R., Kruse, E., Foreman-Mackey, D., Agol, Eric, and Saunders, Nicholas. (2017) An update to the EVEREST K2 pipeline: Short cadence, saturated stars, and Kepler-like photometry down to Kp = 15. arXiv:1702.05488.

Luger, R., Lustig-Yaeger, J., Fleming, D. P., Tilley, M. A., Agol, E., Meadows, V. S., Deitrick, R., and Barnes, R. (2017) *The Pale Green Dot: A Method to Characterize Proxima Centauri b using Exo-Aurorae*. ApJ 837, 63.

Meadows, V. S., Arney, G. N., Schwieterman, E. W., Lustig-Yaeger, J., Lincowski, A. P., Robinson, T., Domagal-Goldman, S. D., Barnes, R. K., Fleming, D. P., Deitrick, R., Luger, R., Driscoll, P. E., Quinn, T. R., and Crisp, D. (2016) *The Habitability of Proxima Centauri b: II: Environmental States and Observational Discriminants.* arXiv:1608.08620.

Barnes, R., Deitrick, R., Luger, R., Driscoll, P. E., Quinn, T. R., Fleming, D. P., Guyer, B., McDonald, D. V., Meadows, V. S., Arney, G., Crisp, D., Domagal-Goldman, S. D., Lincowski, A., Lustig-Yaeger, J., and Schwieterman, E. (2016) *The Habitability of Proxima Centauri b I: Evolutionary Scenarios.* arXiv:1608.06919.

Luger, R., Agol, E., Kruse, E., Barnes, R., Becker, A., Foreman-Mackey, D., and Deming, D. (2016) *EVEREST: Pixel Level Decorrelation of K2 Light curves.* AJ 152, 100.

Schwieterman, E. W., Meadows, V. S., Domagal-Goldman, S. D., Deming, D., Arney, G. N., Luger, R., Harman, C. E., Misra, A., and Barnes, R. (2016) *Identifying Planetary Biosignature Impostors: Spectral Features of CO and O₄ Resulting from Abiotic O₂/O₃ Production.* ApJL 819, 13.

Luger, R. and Barnes, R. (2015) Extreme Water Loss and Abiotic O_2 Buildup on Planets Throughout the Habitable Zones of M Dwarfs. Astrobiology 15, 119.

Luger, R., Barnes, R., Lopez, E., Fortney, J., Jackson, B., and Meadows, S. (2015) *Habitable Evaporated Cores: Transforming Mini-Neptunes into Super-Earths in the Habitable Zones of M Dwarfs.* Astrobiology 15, 57.

Deitrick, R., Barnes, R., McArthur, B., Quinn, T., Luger, R., Antonsen, A., and Benedict, G. (2014) The Three-dimensional Architecture of the v Andromedae Planetary System ApJ 798, 46.

Honors and Awards

ARCS Fellowship

2012 - 2014

Achievement Rewards for College Scientists Foundation Fellowship recipient

Bobby Berman Memorial Prize

May 201

Awarded to a graduating senior who has shown achievement, commitment, and leadership in Physics and Astronomy

The Phi Beta Kappa Society

May 2010

Inducted member

TEACHING EXPERIENCE

Teacher, St. Luke's School, New Canaan, CT

2010 - 2012

- · · · Created and taught a rigorous, college-level elective course in astrophysics aimed at seniors interested in pursuing college classes in the field
- · · · Taught three sections of an 11th grade physics class with a focus on astronomy, aiming to help students develop critical thinking and creative problem solving skills

Science Associate & Tutor, Swarthmore College

2009 - 2010

 \cdots Directed weekly large-group study sessions for an introductory course in astronomy; tutored students in courses in mechanics and E&M

Work Experience

IT Manager, Virtual Planet Laboratory @ UW

2013 -

· · · Manage VPL's virtual conferencing system and network

LEADERSHIP

Head Coach, St. Luke's School

2010 - 2012

- · · · Head coach of the JV Boys Soccer and Fencing Teams
- · · · Assistant coach of the MS Tennis Team

Captain, Swarthmore College Fencing Team

2009 - 2010

· · · Captain and founding member of the Sabre Team