### Samson A. Johnson

### Curriculum Vitae

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#### Education

### The Ohio State University

Columbus, Ohio, 2016-Present

- PhD Student in Astronomy

Dean's Distinguished University Fellowship WFIRST Microlensing Survey Science Investigation Team Jet Propulsion Lab Summer Internship Program NSF GRFP Honorable Mention 2016

#### University of Montana, Davidson Honors College

Missoula, Montana, 2011-2015

- BA in Physics, BA in Mathematics, High Honors

Montana University System Honors Scholarship Horatio Alger Montana Undergraduate Scholarship Jack and Isabel Haynes Scholarship Cail Physical/Bio-Sciences Scholarship Shallenberger/Alumni Association Scholarship in Physics

### **Publications**

#### First Author

- The Quiescent Progenitors of Type II Supernovae
   Johnson, S. A., Kochanek, C. S., Adams, S. M., 2018, MNRAS, 480, 1696
- On the Progenitor of the Type Ibc Supernova 2012fh
   Johnson, S. A., Kochanek, C. S., Adams, S. M., 2017, MNRAS, 472, 3115
- The Radial Velocity of OGLE-2015-BLG-0966S
   Johnson, S. A., Yee, J. C., 2017, PASP, 129, 074401

#### Coauthor:

- 1. A Full Implementation of Spectro-Perfectionism for Precise Radial Velocity Exoplanet Detection: A Test Case With the MINERVA Reduction Pipeline Cornachione, M., et al, accepted
- 2. Minerva-Australis. I. Design, Commissioning, and First Photometric Results Addison, B., Wright, D. J., Wittenmyer, R. A., et al. 2019, PASP, 131, 115003
- 3. First Radial Velocity Results From the MINiature Exoplanet Radial Velocity Array (MINERVA) Wilson, M. L., Eastman, J. D., Cornachione, M. A., et al. 2019, PASP, 131, 115001
- KELT-22Ab: A Massive, Short-Period Hot Jupiter Transiting a Near-solar Twin Labadie-Bartz, J., Rodriguez, J. E., Stassun, K. G., et al. 2019, ApJS, 240, 13
- KELT-19Ab: A...Hot Jupiter Transiting a Likely Am Star with a Distant Stellar Companion Siverd, R. J., Collins, K. A., Zhou, G., et al. 2018, AJ, 155, 35
- 6. KELT-20b: A giant planet with a period of P~3.5 days transiting the...early A star HD 185603 Lund, M. B., Rodriguez, J. E., Zhou, G., et al. 2017, AJ, 154, 194
- The Mysterious Dimmings of the T Tauri Star V1334 Tau
   Rodriguez, J. E., Zhou, G., Cargile, P. A., et al. 2017, ApJ, 836, 209

## **Employment**

Software Developer, Harvard-Smithsonian Center for Astrophysics

Aug. 2015- July 2016

- Refined site operation software for MINERVA robotic exoplanet detection telescope array
- Developed software for automation of precision RV spectrograph

Research Assistant, University of Montana

June 2014-June 2015

- Designed and tested dispatch scheduling software/simulation for use with MINERVA

Laboratory Assistant, University of Montana

Winter 2011, Summer 2013

- Assembled vacuum chambers, handled vacuum specific hardware
- Designed, constructed framework for vacuum pumps and chambers

Good Food Store, Missoula, MT

April 2012-Oct. 2013

- Deli and beverage bar staff, commendations for helpfulness and safety

The Huckleberry People, Missoula, MT

Sept. 2011-April 2012

- Production based job working in warehouse environment

Papa Murphy's Pizza, Missoula, MT

July 2009-Sept. 2011

- Supervisor position, delegating tasks to crews of 5-10 members

## Advising

- Abby Aronica (undergraduate), *The Ohio State University*, 2019 Refined galactic model for use in microlensing survey simulations.
- Kit Fieldhouse (high school), *University of Montana*, 2015: Developed a program to automate follow-up observation scheduling of transiting planet candidates. Employed in KELT follow-up, and presented at national science fairs.

# Teaching/Mentoring

- Ohio State, Polaris Mentor of undergraduates S. Petz, C. Roper (2019,2020)
- Ohio State, Methods of Astronomical Observation & Data Analysis (Astron 3350, GTA 2018)
- Ohio State, Life in the Universe (Astron 1141, GTA 2019)
- Ohio State, From Planets to the Cosmos: Lab Section (Astron 1150, GTA 2019)

## Service

- Referee for ApJ
- Ohio State University
  - Assistant in graduate admissions, spring 2020
  - Graduate student chair of graduate admissions, spring 2019
  - Graduate student lead of feedback in astronomy faculty search, spring 2018
  - Made a lot of coffee

#### Outreach

- Polaris Mentor 2019-2020 (group enhancing retention of underrepresented undergraduates in physics/astronomy)
- Mentor for new astronomy graduate students at Ohio State University (2019-2020)
- Friends of Ohio State Astronomy, volunteer for 6 events, 2017-2019
- Graduate Order of Magnitude group, co-founder, 2017-2019, Columbus, Ohio
- Breakfast of Science Champions, coordinator and volunteer, 11/2017, 11/2018 Columbus, Ohio
- Ohio Supercomputer Center Summer Institute 07/2017, mentor Columbus, Ohio

- Science Olympiad, Astronomy portion exam proctor, 04/2017 Columbus, Ohio
- Astronomy on Tap lecture, 2017 Columbus, Ohio
- Blue Mountain Observatory public viewing nights, assistant for 3 nights, 2014 Missoula, Montana
- Society of Physics Students member, 2013-2015 Missoula, Montana

## Observing Experience

- MINERVA, Mt Hopkins, Arizona 4x0.7 meter, 9 weeks on site
- CTIO, La Serena, Chile, SMARTS 1.3 meter, 14 nights of microlensing observing
- Large Binocular Telescope, Mt Graham, Arizona 2x8.4 meter, 10 nights
- Tillinghast Telescope, Mt Hopkins, Arizona 1.5 meter, 2 nights

## Conferences and Workshops

- 2019 Sagan Summer Workshop: Astrobiology for Astronomers, Attendee
- The WFIRST Microlensing Survey: Predictions of the Free Floating Planet Detection Rate, Science in Our Own Backyard: Exploring the Galaxy...with WFIRST, 15 min talk
- The WFIRST microlensing survey: mission updates and predictions of the free-floating planet yield 23rd International Microlensing Conference, 15 min talk
- Measuring the abundance of free floating planets with WFIRST, Emerging Researchers in Exoplanet Science IV 2018, 15 minute talk
- 2017 Sagan Exoplanet Summer Workshop: Microlensing in the Era of WFIRST, Attendee
- Synopsis of the MINiature Exoplanet Radial Velocity Array (MINERVA), Emerging Researchers in Exoplanet Science III 2017, 15 minute talk
- Dispatch Scheduling to Maximize Exoplanet Detection, SPIE Astronomical Telescopes + Instrumentation 2016, 15 minute talk
- Dispatch Scheduling to Maximize Exoplanet Detection, American Astronomical Society 2016 Winter meeting, poster
- Optimization of the MINERVA Exoplanet Search Strategy via Simulations, American Astronomical Society 2015 Winter meeting, poster

### Seminars

- The Secret Lives of Neutrinos: Oscillations and Mass Differences, Apr. 10, 2015. Physics and Astronomy Seminar, University of Montana.
- Dispatch Scheduling to Maximize Exoplanet Yield, Nov. 7, 2014. Physics and Astronomy Seminar, University of Montana.