

4055 McPherson Lab
140 W 18th Ave
Columbus, Ohio 43210

johnson.7080@osu.edu
samson.a.johnson@gmail.com
Personal website: samsonajohnson.github.io

Education

The Ohio State University Columbus, Ohio, 2016-2021 (expected)

- PhD Student in Astronomy
- Dean’s Distinguished University Fellowship
- Roman* Galactic Exoplanet 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

1. *Predictions of the Nancy Grace Roman Space Telescope Galactic Exoplanet Survey II: Free-Floating Planet Detection Rates*
Johnson, S. A., Penny, M. T., Gaudi, B. S., et al. 2020, AJ, 160, 123
2. *The Quiescent Progenitors of Type II Supernovae*
Johnson, S. A., Kochanek, C. S., Adams, S. M., 2018, MNRAS, 480, 1696
3. *On the Progenitor of the Type Ibc Supernova 2012fh*
Johnson, S. A., Kochanek, C. S., Adams, S. M., 2017, MNRAS, 472, 3115
4. *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. A., Bolton, A. S.; Eastman, J. D., et al, 2019, PASP, 131, 124503
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
4. *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
5. *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 $P \sim 3.5$ days transiting the...early A star HD 185603*
Lund, M. B., Rodriguez, J. E., Zhou, G., et al. 2017, AJ, 154, 194

7. *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

- Research Assistant, 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

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), Amanda Isadore (2020-2021)
- 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 chair for feedback in astronomy faculty search, spring 2018
 - Made a lot of coffee

Outreach

- Polaris Mentor 2019-2021 (group enhancing retention of underrepresented undergraduates in physics/astronomy)
- Academic Facilitator for URSA 2021 (early arrival program associated with Polaris, designed curriculum on exoplanets, experimentation, metacognition)
- 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 queue
- Tillinghast Telescope, Mt Hopkins, Arizona - 1.5 meter, 2 nights queue

Conferences and Workshops

- *The Roman Galactic Exoplanet Survey: Prospects for Constraining the Frequency of Earth-Analogs* Bay Area Exoplanet Meeting 34, 20 min talk
- *The WFIRST Microlensing Survey: Constraints on the frequency of Earth-analogs* Exoplanets III, 15 min talk
- 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 Roman Galactic Exoplanet Survey: Prospects for Constraining the Frequency of Earth-Analogs* Sept. 8, 2020. Harvard-Smithsonian Center for Astrophysics GCSP Seminar, 20 min talk
- *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.

Media

- *Unveiling Rogue Planets With NASAs Roman Space Telescope* Feature on nasa.gov, cnn.com and others 08/21/2020
- *Discovering the Unseen: Ohio State and NASA Work Together to Find New Exoplanets* The Lantern, 02/28/2019

Non-technical Employment

Good Food Store, Missoula, MT

April 2012-Oct. 2013

- Deli and beverage bar staff, customer service, teamwork, task management
- Received multiple commendations on helpfulness and safety

The Huckleberry People, Missoula, MT

Sept. 2011-April 2012

- Production based job working in warehouse environment
- Time management, order assembly, manual dexterity

Papa Murphy's Pizza, Missoula, MT

July 2009-Sept. 2011

- Supervisor position, delegating tasks to crews of 5-10 members
- Customer service, money handling, problem solving, conflict resolution