

Molly N. Simon

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Contact Information:

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EDUCATION

Ph.D. Planetary Sciences (expected 2019), University of Arizona, Tucson, AZ
Minor: Astrobiology

Certificate in College Teaching (expected 2018), University of Arizona, Tucson, AZ

M.S. Planetary Sciences (2016), University of Arizona, Tucson, AZ

B.S. Geophysical Sciences (2013), College Honors, The University of Chicago, Chicago, IL

RESEARCH EXPERIENCE

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|----------------|---|
| 2016 - Present | Graduate Research Associate, University of Arizona (LPL).
An Analysis of College Students' Preinstructional Ideas
About Planet Formation & The Development and Validation
of the Planet Formation Concept Inventory (PFCI)
Advisor: Dr. Chris Impey |
| 2013 - 2016 | Graduate Research Assistant, University of Arizona (LPL)
Understanding Protoplanetary Disk Winds and Planet Interactions via
Low Velocity Forbidden Line Emission
Advisor: Dr. Ilaria Pascucci |
| 2012 - 2013 | Honors Thesis in Geophysical Sciences, The University of Chicago
Dust Accretion onto Planetesimals in the Solar Nebula
Advisor: Dr. Fred Ciesla |
| 2012 | Undergraduate Research Assistant, The University of Chicago
Development of a Graphical User Interface (GUI) to remove
interference from Earth's atmosphere when analyzing exoplanets
through ground-based transit spectroscopy observations
Advisor: Dr. Jacob Bean |
| 2011 | Undergraduate Research Fellow, NASA Goddard Space Flight Center
Survey of lava flows in Mars' Tharsis Region using SHallow RADar
(SHARAD) on the Mars Reconnaissance Orbiter |

Advisor: Dr. Lynn Carter

2011 Research Participant, National Radio Astronomy Observatory
Educational Research in Radio Astronomy (ERIRA)

AWARDS & FELLOWSHIPS

2017 - Present University of Arizona/NASA Space Grant Graduate Research Fellowship (\$16,750)

2017 Lunar and Planetary Laboratory (LPL) Cavanagh Travel Grant (\$1,500)

2017 University of Arizona College of Science: Galileo Circle Award (\$1,000)

2014 Graduate Teaching Excellence Award (\$1,000)
Instructor: Dr. Steve Kortenkamp

2014 Astrobiology School Participant & Selectee, Oracle AZ

2012 - 2013 NASA Student Ambassador

2011 NASA Undergraduate Research Fellowship

PEER REVIEWED PUBLICATIONS

SIMON, M. N., Impey, C., & Buxner, S. (2018) A Survey and Analysis of College Students' Understanding of Planet Formation Before Instruction, *Astrobiology*, submitted 31 December 2017

SIMON, M. N., Pascucci, I., Edwards, S., et al. (2016) Tracing Slow Winds from T Tauri Stars via Low Velocity Forbidden Line Emission, *ApJ*, 831, 169. doi: 10.3847/0004-637X/831/2/169

Pascucci et al. (2015) (**SIMON, M. N.**, 8th author) Narrow Na and K Absorption Lines Toward T Tauri Stars: Tracing the Atomic Envelope of Molecular Clouds, *ApJ*, 814, 14.

SIMON, M. N. et al. (2014) Studies of lava flows in the Tharsis Region of Mars using SHARAD, *JGR: Planets*, 119, 11, 2291-2299. doi: 10.1002/2014JE004666

FIRST AUTHORED CONFERENCE ABSTRACTS

SIMON, M. N., Impey, C., & Buxner, S., 2018. The Development of the Planet Formation Concept Inventory: A Preliminary Analysis of Version I. 231st Meeting of the American Astronomical Society (AAS), Abstract ID: 113.05 (Special Session)

Oral Presentation

SIMON, M. N., Impey, C., & Buxner, S., 2017. An Analysis of College Students' Understanding of Planet Formation Before Instruction. The International Symposium on Education in Astronomy and Astrobiology (ISE2A). Utrecht, Netherlands

Oral Presentation

SIMON, M. N., Impey, C., & Buxner, S., 2017. A Preliminary Analysis of College Students' Preinstructional Ideas About Planet Formation. 229th Meeting of the AAS, Abstract ID: 213.02 (Special Session)

Oral Presentation

SIMON, M. N., Pascucci, I., Edwards, S., et al. 2017. Evidence for Magnetically Driven Protoplanetary Disk Winds. 229th Meeting of the AAS, Abstract ID: 420.05

Oral Presentation

SIMON, M. N., Impey, C., & Buxner, S., 2016. Developing New Pedagogy to Teach Planet Formation to Undergraduate Non-Science Majors. 228th Meeting of the AAS, Abstract ID: 105.02

Oral Presentation

SIMON, M. N., Pascucci, I., Edwards, S., et al. 2016. Tracing Slow Winds from T Tauri Stars via Low Velocity Forbidden Line Emission. 228th Meeting of the AAS, Abstract ID: 308.04

Oral Presentation

SIMON, M. N., Pascucci, I., Edwards, S., et al. 2015. The Role of Winds in Clearing Protoplanetary Disks. Gordon Research Conference: Origins of Solar Systems, Conferee ID: 1323527

Poster Presentation

SIMON, M. N., Pascucci, I., Rigliaco, E., et al. 2015. Measuring the Relative Contributions of Viscous Accretion and Photoevaporation to the Dispersal of Protoplanetary Disks. Star and Planet Formation in the Southwest.

Poster Presentation

SIMON, M. N., Pascucci, I., Rigliaco, E., et al. 2014. Measuring the Relative Contributions of Viscous Accretion and Photoevaporation to the Dispersal of Protoplanetary Disks. Exoplanets, Biosignatures, & Instruments meeting id.P2.10.

Poster Presentation

SIMON, M. N. & Ciesla, F. J., 2013. Dust Accretion onto Planetesimals in the Solar Nebula. 44th Lunar and Planetary Science Conference, Abstract #1361.

Poster Presentation

SIMON, M. N., Carter, L. M., Campbell, B.A., et al. 2012. Studies of Lava Flows in Mars' Tharsis Region Using SHARAD Radar. Division of Planetary Science (DPS) Meeting #44, Abstract ID: 213.02.

Poster Presentation

SIMON, M. N., Carter, L. M., Campbell, B.A., et al. 2012. Studies of Lava Flows in Mars' Tharsis Region Using SHARAD Radar. 43rd Lunar and Planetary Science Conference, Abstract #1595.

Poster Presentation

MEMBERSHIP & SERVICE

2017	American Astronomical Society (AAS) Chambliss Award Judge
2016 - present	Junior Member of the American Astronomical Society
2016 - present	Graduate Student Representative: Departmental Life Committee, LPL
2013 - present	Co-organizer of "Bratfest" Graduate Student Event, LPL
2014 - 2015	Coordinator for the Prospective Graduate Students, LPL

TEACHING & PUBLIC OUTREACH

Oct 2017 - Jan 2018	Boys and Girls Club of Tucson: Frank and Edith Morton Clubhouse, Volunteer
2017	Planetary Science Institute: "Space Night" at the Tucson Children's Museum, Volunteer

- 2017 Invited Speaker: Sun City - Oro Valley (SCOV) Astronomy Club, Planet Formation and Planetary Habitability
- 2017 American Astronomical Society (AAS) Educational Outreach Event Participant (Dallas, TX), "Meteorites"
- 2016 Guest Lecturer (3 lectures), ASTR 202: Life in the Universe University of Arizona
- 2016 Teaching Assistant, University of Arizona, ASTR 202: Life in the Universe, Dr. Daniel Apai
- 2016 Developed the "**Exoplanet Habitability Activity**" for Dr. Chris Impey used at the Vatican Observatory Summer School in Astrophysics: Water in the Solar System & Beyond
- 2015 Teaching Assistant, University of Arizona, PTYS 170B2: The Universe and Humanity: Origin and Destiny, Dr. Kat Volk.
- 2015 Guest Lecturer, PTYS 550: Origin of the Solar System and Other Planetary Systems, "Peer Reviewed Publications Project" University of Arizona
- 2015 Teaching Assistant, University of Arizona, PTYS 214: Astrobiology: A Planetary Perspective, Dr. Ilaria Pascucci
- 2014 Guest Lecturer, Tucson High School Astronomy Department, "Planet Formation"
- 2014 Guest Scientist, Anshe Emet Day School (Chicago, IL), "Interview a Scientist Project"
- 2013 Guest Lecturer, PTYS 206: Our Golden Age of Planetary Exploration, "Exoplanets: The Study of Planets Outside Our Solar System" University of Arizona
- 2013 Teaching Assistant, University of Arizona, PTYS 206: Our Golden Age of Planetary Exploration, Dr. Steve Kortenkamp