

Shannon Dulz

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Education	University of Notre Dame Ph.D., Physics	2023 (expected)
	University of Notre Dame M.S., Physics	2022
	Missouri State University B.S., Physics, Mathematics	2017
Research	Graduate Research , University of Notre Dame <i>Exoplanet population demographics simulations</i> <i>High-contrast imaging of accelerating stars</i> <i>Population statistics of cold giant planets</i>	2017 - present
	Research Intern , Missouri State University <i>Transit timing analysis from Kepler data</i> <i>Transit observations and analysis of Hot Jupiters</i>	2014 - 2017
	NSF REU , University of Notre Dame <i>Radial velocity survey simulations</i>	2016
	NSF REU , University of Minnesota <i>Monte Carlo simulations and polymerization of neutron veto plastics for the SuperCDMS experiment</i>	2015
Publications	Bowler, B., Endl, M., Cochran, W., et al. “The McDonald Accelerating Stars Survey (MASS): Discovery of a Long-period Substellar Companion Orbiting the Old Solar Analog HD 47127”, 2021, The Astrophysical Journal Letters, Volume 913, Issue 2, id.L26	
	Stark, C., Dressing, C., Dulz, S., et al. “Toward Complete Characterization: Prospects for Directly Imaging Transiting Exoplanets”, 2020, The Astronomical Journal, Volume 159, Issue 6, id.286	
	Dulz, S., Plavchan, P., Crepp, J., et al. “Joint Radial Velocity and Direct Imaging Planet Yield Calculations: I. Self-consistent Planet Populations”, 2020, The Astrophysical Journal, Volume 893, Issue 2, id.122	
	Gaudi, B. S., Seager, S., Mennesson, B., et al. “The Habitable Exoplanet Observatory (HabEx) Mission Concept Study Final Report”, 2020, arXiv:2001.06683	

Service	ND Graduate Physics Society Executive Board	2021 - 2022
	Department Diversity Committee	2019 - 2021
	Volunteer with ExP@ND demo team	2017 - 2019
	Our Universe Revealed series: “Spooky Science Demo Show”, Oct 24, 2017	
	Our Universe Revealed series: “Expect the Unexpected”, May 15, 2018	
	Halloween Spooktacular demo show at Elkhart ETHOS center, Oct 26, 2019	
	Volunteer for Observatory Open House events	2018
	Our Universe Revealed series: “More Summertime Stargazing”, Aug 17, 2018	
Awards and Fellowships	NSF Graduate Research Fellowship	2017 - 2022
	Missouri State University Presidential Scholarship	2013 - 2017
	Deans List, Missouri State University	2013 - 2017
	Departmental Undergraduate Scholarships	2013 - 2017
Teaching Experience	Teaching Practicum (Guest lectures)	2021 - present
	Elementary Cosmology: “The Emergence of Complex Life”, Dec 7, 2021	
	Physics for Life Sciences II: “Images”, Mar 30, 2022	
	Physics for Life Sciences I: “Potential Energy”, October 3, 2022	
	Scientific Writing for REU students	2022
	Instructor	
	Teaching Assistant	2017 - 2019
	Physics Research Writing Consultant, Fall 2022	2022 - present
	Physics of Astrophysics, Grading, Fall 2022	
	Junior Seminar, Writing Support, Fall 2022	
	Demonstrations Support, Fall 2022	
	Physics B Lab, Lab and Grading, Spring 2019	
	Engineering Physics II Lab, Lab and Grading, Spring 2019	
	Physics A Lab, Lab and Grading, Fall 2018	
	Descriptive Astronomy, Grading, Fall 2018	
	Elementary Cosmology, Grading, Fall 2018	
	Science Literacy, Grading and Help Sessions, Spring 2018	
	Energy and Society, Grading and Help Sessions, Fall 2017	

- Presentations “Cold Exoplanets: Ground-based Direct Imaging and Population Studies Planning for Future Space Missions”, Dulz, S., Missouri State University departmental seminar, March 2021 (Invited)
- “Self-Consistent Planet Populations for Direct Imaging Space Missions”, Dulz, S., Exoplanet Demographics (NExSci, IPAC/Caltech), November 2020
- “Planet Population Demographics for Radial Velocity and Direct Imaging Yield Calculations”, Dulz, S., Plavchan, P., Crepp, J., Stark, C., Morgan, R., Kane, S., Newman, P., Matzko, W., Mulders, G., American Astronomical Society meeting, June 2019
- “Exoplanet Demographics for EPRV and Direct Imaging Yield Calculations” (poster), Dulz, S., Plavchan, P., Crepp, J., Newman, P., Stark, C., Morgan, R., Kane, S., American Astronomical Society meeting, January 2019
- “Boosting the Yield of Direct Imaging Space Missions with EPRV Measurements” (poster), Dulz, S., Crepp, J., Plavchan, R., Newman, P., Stark, C., Sagan Exoplanet Workshop, July 2018
- “Efficiency of the WFIRST Coronagraphic Survey based on Precursory Radial Velocity Measurements” (poster), Dulz, S., Crepp, J., Plavchan, R., Newman, P., Stark, C., American Astronomical Society meeting, January 2018
- “Exoplanet Transit Timing Variations with Kepler Spacecraft Data” (poster), Dulz, S., Reed, M., Missouri State University College of Natural Sciences Undergraduate Research Day, April 2017
- “Transit Timing Variation and Exoplanet Demographics Studies” Dulz, S., Missouri Space Grant Consortium Meeting, April 2017
- “Transit Timing Variation analysis with Kepler light curves of KOI 227 and Kepler 93b” (poster), Dulz, S., Reed, M., American Astronomical Society, January 2017
- “Analyzing Kepler Lightcurves of Exoplanets” (poster), Dulz, S., Reed, M., American Astronomical Society Division of Planetary Sciences meeting, October 2016
- “Statistical Simulations of a Radial Velocity Search for Exoplanets: Implications for NASA’s WFIRST Mission” Dulz, S., University of Notre Dame Physics REU Program, August 2016
- “Observations of Exoplanets with the Kepler Spacecraft” (poster), Dulz, S., Reed, M., Missouri State University College of Natural Sciences Undergraduate Research Day, April 2016
- “Observations of Exoplanets with the Kepler Spacecraft”, Dulz, S., Reed, M., Mid-American Regional Astrophysics Conference, April 2016

“Observations of Transiting Hot Jupiter Exoplanets” (poster), Dulz, S., Reed, M., University of Nebraska-Lincoln Conference for Undergraduate Women in the Physical Sciences, October 2015

“Monte Carlo Simulations and Polymerization of Neutron Veto Plastics for the SuperCDMS Experiment”, Dulz, S., University of Minnesota Physics REU Program, August 2015

“Monte Carlo Simulations and Polymerization of Neutron Veto Plastics for SuperCDMS Experiment” (poster), Dulz, S., University of Minnesota Summer Undergraduate Research Expo, August 2015

“Observations to constrain the albedo of a Hot Jupiter”, Dulz, S., Reed, M., Mastroianni, K., 2015 Mid-American Regional Astrophysics Conference, April 2015 & Missouri Space Grant Consortium Meeting, April 2015

“Observations to Constraint the Albedo for Hot Jupiter Exoplanet Tres-4b” (poster), Dulz, S., Reed, M., APS Conference for Undergraduate Women in Physics, January 2015

“Observations of Earth-like Exoplanets” (poster), Dulz, S., Reed, M., Mastroianni, K., Winans, A., Missouri Space Grant Consortium Meeting, April 2014 & Missouri State University College of Natural Sciences Undergraduate Research Day, May 2014