

Benjamin M. Tofflemire
51 Pegasi b Postdoctoral Fellow

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RESEARCH INTERESTS Formation and evolution of stars and planets, structure and evolution of protoplanetary disks, precise measurements of fundamental stellar parameters, signatures of stellar magnetism

SUMMARY **Funding:** \$653,200 in awards
Publications:

- First Author Publications: 9 | 210+ citations
- Total Refereed Publications: 43 | 3500+ citations
- H-Index: 19
- Student Publications: 4
- Consistent growth in publications and citations over the past 5 years

Students: 8 undergrads, 6 from underrepresented groups
Mentoring: Lead UT's TAURUS mentor training, invited to lead workshop for NSF fellows
Teaching: 1 new undergrad-level course co-prep, 2 semesters leading 100-level mandatory TA sections, 10+ guest lectures
Observing Experience:

- Space-based: IR, X-ray: *Spitzer*, *XMM-Newton*, *Chandra*
- Ground-based: Sub-mm, IR, Optical: ALMA, Gemini South, SALT, including 800+ hours of on-site photometry and spectroscopy

APPOINTMENTS 51 Pegasi b Postdoctoral Fellow, UT-Austin – Faculty Host: Prof. Adam Kraus 2020-present
Postdoctoral Fellow, UT-Austin – Advisor: Prof. Adam Kraus 2018-2020
Research Assistant, UW-Madison – Advisor: Prof. Robert Mathieu 2013-2018
Research Assistant, UW-Madison – Advisor: Dr. Marina Orio 2011-2013
Research Assistant, U. of Washington – Advisor: Dr. J. Wisniewski & Prof. S. Hawley 2010-2011

EDUCATION **University of Wisconsin-Madison** Madison, WI
Ph.D. Astronomy, *Accretion Dynamics in Pre-Main Sequence Binary Stars* July 2018
M.S. Astronomy, Physics Minor June 2013
University of Washington Seattle, WA
B.S. Astronomy & Physics June 2011

SELECT PEER-REVIEWED PUBLICATIONS **First Author Publications**

- ▷ **Tofflemire**, B. M., Kraus, A. L., Mann, A.W., et al. (12 co-authors) 2022, AJ, submitted
| [ADS](#)
A Low-Mass, Pre-Main Sequence Eclipsing Binary in the 40 Myr Columba Association – Fundamental Stellar Parameters and Modeling the Effect of Star Spots
- ▷ **Tofflemire**, B., Rizzuto, A., Newton, E., et al. (24 co-authors) 2021, AJ, 161, 171
| [ADS](#) | 20 cit.
TESS Hunt for Young and Maturing Exoplanets (THYME). V. A Sub-Neptune Transiting a Young Star in a Newly Discovered 250 Myr Association
- ▷ **Tofflemire**, B., Mathieu, R., Johns-Krull, C. 2019, AJ, 158, 245
| [ADS](#) | 19 cit.
Accretion Kinematics in the T Tauri Binary TWA 3A: Evidence for Preferential Accretion onto the TWA 3A Primary
- ▷ **Tofflemire**, B., Mathieu, R., Herczeg, G., Akeson, R., & Ciardi, D. 2017b, ApJL, 842, L12
| [ADS](#) | 30 cit.
Pulsed Accretion in the T Tauri Binary TWA 3A

PI-GRANTS & AWARDS	Heising-Simons Foundation Early-Faculty Development Award	(\$125,000)	2022
	<i>TESS</i> Cycle 4 Guest Investigator Program	(\$70,000)	2021
	51 Pegasi b Postdoctoral Fellowship in Planetary Astronomy	(\$375,000)	2020
	<i>TESS</i> Cycle 3 Guest Investigator Program	(\$75,000)	2020
	University of Wisconsin Jansky Award for Outstanding Research		2017
	UW-Madison Graduate School Conference Presentation Award	(\$2,400)	2015, 2016, 2017
	Sigma Xi Grants in Aid of Research	(\$2,500)	2015
	University of Wisconsin Bautz Travel Fellowship	(\$1,200)	2015
	University of Wisconsin Vilas Research Travel Grant	(\$600)	2015
	University of Washington's Astronomy Bear Prize Recipient		2011
	University of Washington Mary Gates Research Scholarship	(\$4,000)	2010, 2011
SELECT OBSERVING PROGRAMS	ALMA Cycle 7		
	◦ PI: Planet Formation and Survival in Newly-Forming Binary Systems (16 hr)		
	Spitzer DDT		
	◦ PI: Precision Measurements of Stellar Radii in Young Eclipsing Binaries (94 hr: Priority 1)		
	Gemini-South		
	◦ PI: The Empirical Mass-Radius Relation from 10 to 600 Myr (24 hr: Band 1)		
	◦ PI: Determining Orbital Solutions for Young Eclipsing Binaries (30 hr: Band 1)		
	Southern African Large Telescope		
	◦ PI: Time-Series Spectroscopy of Pre-Main Sequence Binaries (42.5 hr: P0/P1)		
	WIYN 3.5-m Telescope		
	◦ PI: Time-series spectroscopy of flare stars in Pleiades star cluster (3 nights)		
SELECT STUDENT RESEARCH	Mikayla Wilson (TCU): TAURUS Scholar		2021
	◦ Characterization of a Solar Mass Eclipsing Binary		
	◦ Led Research Note to the AAS		
	◦ Poster to be presented at the 2023 Winter AAS		
	◦ Currently: Astronomy graduate student at UC Santa Cruz		
	Shannon Fitton (UT)		2020-2022
	◦ Determining the Orbital Parameters of Disk-Bearing Binary Systems		
	◦ Led Research Note to the AAS		
	◦ Co-author on a publication in prep		
	◦ Currently: Astronomy graduate student at UNC Chapel Hill		
	Miguel Gutierrez (Florida Inst. Tech.): TAURUS Scholar		2019
◦ Constraining Temperature and Density of Accretion Flows in T Tauri Stars from Brackett Line Ratios			
◦ Co-Author on ApJ Publication (Kidder et al. 2021)			
◦ Led Research Note to the AAS			
◦ 2020 Winter AAS Poster			
◦ Currently: Data Scientist for Dell Technologies			
Victoria Catlett (UT-Dallas): UT REU		2019	
◦ Near-infrared Accretion Diagnostics of Young Stellar Objects			
◦ Co-Author on ApJ Publication (Kidder et al. 2021)			
◦ Led Research Note to the AAS			
◦ 2020 Winter AAS Poster			
◦ Currently: Greenbank Telescope Software Engineer			
MENTORING TRAINING	Workshops Led		
	◦ Invited to lead Mentor Training Workshop for NSF AAPF Fellow Symposium		2023
	◦ Lead Mentor Training Workshop for UT's TAURUS and REU research programs		2021,2022
Workshops Attended			
◦ DELTA (CIRTL) Mentor Training Program		2014	