

Benjamin M. Tofflemire
51 Pegasi b Postdoctoral Fellow

CONTACT INFORMATION	Department of Astronomy University of Texas at Austin 2515 Speedway, Stop C1400 Austin, TX 78712	tofflemire@utexas.edu phone: (503) 805-0214 Website: tofflemire.github.io
RESEARCH INTERESTS	Planet formation and evolution, structure and evolution of protoplanetary disks, binary star formation, T Tauri stars, accretion diagnostics	
APPOINTMENTS	51 Pegasi b Postdoctoral Fellow, UT Austin Postdoctoral Fellow, UT Austin	Sept 2020 - present August 2018 - August 2020
EDUCATION	Ph.D. Astronomy University of Wisconsin-Madison • Advisor: Professor Robert D. Mathieu • Thesis: <i>Pulsed Accretion in Eccentric Binaries</i> B.S. Astronomy & Physics University of Washington	July 2018 Madison, WI, USA June 2011 Seattle, WA, USA
RESEARCH	Disk Survival in Binary Systems • PI of ALMA Cycle 7 program to observe protoplanetary disks in binary systems with known orbital solutions • Determine binary orbital parameters that foster the survival of protoplanetary material THYME – TESS Hunt for Young and Maturing Exoplanets • Lead spectroscopic followup of <i>TESS</i> planet candidates discovered in young associations • Characterizing stellar host properties and radial-velocity variability Accretion in T Tauri Binary Systems • Measured time-variable accretion rates of pre-main sequence binaries to test numerical models • Characterized the kinematics and spatial distribution of accretion streams feeding young binary star systems with time-series, high-resolution spectroscopy from the SALT telescope	July 2019 - present July 2018 - present June 2012 - July 2018
SELECT PEER-REVIEWED PUBLICATIONS (29 TOTAL) (8 FIRST AUTHOR)	First Author Publications <ul style="list-style-type: none"> ▷ Tofflemire, B. M., Rizzuto, A. C., Newton, E. R., et al. 2021, <i>AJ</i>, 161, 171 <i>TESS Hunt for Young and Maturing Exoplanets (THYME) V: A Sub-Neptune Transiting a Young Star in a Newly Discovered 250 Myr Association</i> ▷ Tofflemire, B. M., Mathieu, R. D., Johns-Krull, C. 2019, <i>AJ</i>, 158, 245 <i>Accretion Kinematics in the T Tauri Binary TWA 3A: Evidence for Preferential Accretion onto the TWA 3A Primary</i> ▷ Tofflemire, B. M., Mathieu, R. D., Herczeg, G. J., et al. 2017b, <i>ApJL</i>, 842, L12 <i>Pulsed Accretion in the Classical T Tauri Binary TWA 3A</i> ▷ Tofflemire, B. M., Mathieu, R. D., Ardila, D. R., Akeson, R. L., et al. 2017a, <i>ApJ</i>, 835, 8 <i>Accretion and Magnetic Reconnection in the Classical T Tauri Binary DQ Tau</i> ▷ Tofflemire, B. M., Gosnell, N. M., Mathieu, R. D., & Platais, I. 2014, <i>AJ</i>, 148, 61 <i>WIYN Open Cluster Study. LIX. Radial Velocity Membership of the Evolved Population of the Old Open Cluster NGC 6791</i> ▷ Tofflemire, B. M., Orio, M., Page, K. L., et al. 2013, <i>ApJ</i>, 779, 22 <i>X-Ray Grating Observations of Recurrent Nova T Pyxidis during the 2011 Outburst</i> ▷ Tofflemire, B. M., Wisniewski, J. P., Kowalski, A. F., et al. 2012, <i>AJ</i>, 143, 12 <i>The Implications of M Dwarf Flares on the Detection and Characterization of Exoplanets at Infrared Wavelengths</i> 	

AWARDS	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 Vilas Research Travel Grant	(\$600) 2015
	University of Wisconsin Bautz Travel Fellowship	(\$1200) 2015
	AAS 225 Chambliss Student Prize Honorable Mention	2015
	University of Wisconsin – University Housing Honored Instructor	2012
	University of Washington’s Astronomy Bear Prize Recipient	2011
	University of Washington Mary Gates Research Scholarship	(\$4,000) 2010, 2011
OBSERVING PROPOSALS & EXPERIENCE	ALMA Cycle 7	
	• PI: Planet Formation and Survival in Newly-Forming Binary Systems (16 hrs)	
	Spitzer DDT	
	• PI: Precision Measurements of Stellar Radii in Young Eclipsing Binaries (94 hrs)	
	Southern African Large Telescope	
	• PI: Time-Series Spectroscopy of Pre-Main Sequence Binaries (42.5 hrs of P0/P1)	
	WIYN 3.5-m Telescope	
	• PI: Radial velocity survey of accreting stars in NGC 2264 (2 nights)	
	• PI: Time-series spectroscopy of flare stars in Pleiades star cluster (3 nights)	
	Las Cumbres Observatories Global Telescope Network	
TALKS	• PI: Characterizing Eclipsing Binaries in Young Clusters (240 hrs over 2 semesters)	
	• Co-I: Time-series photometry of Pre-Main Sequence Binaries (980 hours over 5 semesters)	
	SMARTS 1.3m	
	• PI: Time-series photometry of Pre-Main Sequence Binaries (107 hours over 4 semesters)	
	• PI: Time-series spectroscopy of Pre-Main Sequence Binary V4046 Sgr (42 hours)	
	Cool Stars 20	August 2018
	Plenary Talk	Boston, MA
	AAS 231	January 2018
	Dissertation Talk	National Harbor, MD
	Institute for Theory and Computation (Harvard-CfA)	March 2017
MENTORING EXPERIENCE	Stars and Planets Seminar (Invited)	Cambridge, MA
	American Museum of Natural History	March 2017
	Astronomy Seminar	New York, NY
	Space Telescope Science Institute	March 2017
	Exoplanets, Star and Planet Formation Seminar	Baltimore, MD
	University of Texas-Austin	October 2016
	Stars Seminar (Invited)	Austin, TX
	Cool Stars 19	June 2016
	Contributed Talk	Uppsala, Sweden
	TAURUS Mentor Training	Summer 2019
MENTORING EXPERIENCE	• Developed and facilitated a mentor training seminar for professors, postdocs, and grad students advising TAURUS Scholars	
	TAURUS & NSF REU Advising	Summer 2019
	• Advisor to two students (Miguel Gutierrez, Victoria Catlett) on a project to measure accretion-tracing emission lines in NIR spectra, both attended the 235 Winter AAS and published RNAAS	
	UW-Madison Undergrad Thesis	June 2015 - June 2017
	• Advisor to UW-Madison undergrad Nathan Eggen on project to produce and model the light curves of pre-main sequence binary stars	