

Tim B. Miller

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Research Interests	Galaxy formation and evolution; Galaxy morphology; Low surface-brightness observations; Galaxy surveys; Image analysis techniques;	
Education	<i>Ph.D Candidate, Astronomy</i> Yale University, CT, USA Supervisor: Pieter van Dokkum	Expected Summer 2022
	<i>Masters of Science, Physics</i> Dalhousie University, Nova Scotia, Canada Supervisor: Scott Chapman Thesis: <i>Star Formation Rate Indicators in the FIRE Simulations & SPT2349-56: A Massive and Active Proto-cluster</i>	Awarded August 2017
	<i>Bachelor of Science, First Class Honors in Physics</i> Dalhousie University, Nova Scotia, Canada	Awarded May 2015
Academic Scholarships & Awards	Gruber Science Fellowship Killam Predoctoral Scholarship-Master's NSERC Canada Graduate Scholarship-Master's NSERC Undergraduate Summer Research Award Mackenzie Scholarship	2017 - Present 2016 - 2017 2016 Summers 2013 - 2015 2013
Publications		
First Authored	Miller, T. B. & van Dokkum, P., 2021, "Bayesian fitting of multi-Gaussian expansion models to galaxy images", Accepted, Astrophysical Journal	
	Miller, T. B. , van Dokkum, P., Danieli, S., et al. 2021, "The Dragonfly Wide Field Survey. II. Accurate Total Luminosities and Colors of Nearby Massive Galaxies and Implications for the Galaxy Stellar Mass Function", Astrophysical Journal, 909, 74	
	Miller, T. B. , van den Bosch, F. C., Green, S. B., et al. 2020, "Dynamical self-friction: how mass loss slows you down", MNRAS, 495, 4496.	
	Miller, T. B. , Scott Chapman, Chris Hayward, Peter Behroozi, Matt Bradford, Chris Willott, Jeff Wagg, 2020, "Investigating overdensities around $z > 6$ Galaxies through ALMA observations of [CII]", Astrophysical Journal, 889, 2	
	Miller, T. B. , van Dokkum, P., Mowla, L., et al. 2019, "A New View of the Size-Mass Distribution of Galaxies: Using r_{20} and r_{80} Instead of r_{50} ", Astrophysical Journal Letters, 872, L14	

Miller, T. B., Chapman, S. C., Aravena, M., et al., 2018, “A massive core for a cluster of galaxies at a redshift of 4.3” , Nature, 556, 469

Miller, T. B., Hayward, C. C., Chapman, S. C., et al. 2015, “The bias of the sub-millimetre galaxy population: SMGs are poor tracers of the most-massive structures in the $z \sim 2$ Universe”, Monthly Notices of the Royal Astronomical Society, 452, 878

Co-authored

Hill, R., Chapman, S., Phadke, K. A.,... **Miller, T. B.** ... , et al. 2021, “A census of the stellar content in the protocluster core SPT2349–56 at $z = 4.3$ ”, Monthly Notices of the Royal Astronomical Society, submitted, arXiv:2109.04534

Danieli, S., Lokhorst, D., Zhang, J., ... **Miller, T. B.** ... , et al. 2020, “The Dragonfly Wide Field Survey. I. Telescope, Survey Design and Data Characterization”, Astrophysical Journal, The Astrophysical Journal, 894, 119

Ogiya, G., van den Bosch, F. C., ... **Miller, T. B.** ... et al. 2019, “DASH: a library of dynamical subhalo evolution ”, Monthly Notices of the Royal Astronomical Society, 485, 189.

Mowla, L., van der Wel, A., van Dokkum, P. and **Miller, T. B.**, “A Mass-dependent Slope of the Galaxy Size-Mass Relation out to $z \sim 3$: Further Evidence for a Direct Relation between Median Galaxy Size and Median Halo Mass”, 2019, Astrophysical Journal Letters, 872, L13

Marrone, D. P., Spilker, J. S., Hayward, C. C., ... **Miller, T. B.** ... , et al. “Galaxy growth in a massive halo in the first billion years of cosmic history”, Nature, 2018, 553, 51

Strandet, M. L., Weiss, A., De Breuck, C., ... **Miller, T. B.** ... , et al. , “ISM Properties of a Massive Dusty Star-forming Galaxy Discovered at $z \sim 7$ ”, Astrophysical Journal Letters, 2017, 842, L15

Orr, M. E., Hayward, C. C., Nelson, E. J., ... **Miller, T. B.** ... , et al. “Stacked Star Formation Rate Profiles of Bursty Galaxies Exhibit “Coherent” Star Formation”, Astrophysical Journal Letters , 2017, 849, L2

Richard J. Nowakowski, Gabriel Renault, Emily Lamoureux, Stephanie Mellon & **Tim Miller**, “The game of TIMBER!”, Journal of Combinatorial Mathematics and Combinatorial Computing, 85 (2013) 213-225.

Community and Outreach

Galaxy lunch Organizer Fall 2019 - Fall 2021
 · Moderated and organized weekly journal club and speaker series
 Astronomy on tap New Haven: public talk July 2019
 · “The Hubble constant and our expanding universe”
 Yale astronomy student council Fall 2018 - Fall 2021
 · Founding member, worked with students and faculty to improve the graduate program
 Physics Fun and Discovery Days, Dalhousie University Summers 2013-2016
 · Performed physics demonstrations to elementary and junior high school students

Conference Presentations & Seminars	Galaxies and AGN journal club - John Hopkins U.	Jan 2021
	Thunch - Princeton	Sept 2021
	EAS Annual Meeting	July 2021
	AAS 235	Jan 2020
	SMA Offices, Hawaii, USA	Jul. 2015
	Canadian Undergraduate Physics Conference, Queen's University	Oct. 2014
Observing Experience	Keck I - MOSFIRE	Nov. 2018
	· 3 nights observing	
	Keck I - LRIS	Apr. 2021
	· 2 nights observing	
	SMA	July 2016
	· Guest observer for 5 nights	