

## Tyler Holland-Ashford

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 United States Citizen

### Current Position:

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Postdoctoral Fellow — Harvard Future Faculty Leader Fellowship	2021–Present
Center for Astrophysics   Harvard & Smithsonian	
Advisor: Dr. Pat Slane	

### Education

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The Ohio State University	Astronomy	Ph.D., 2021
The Ohio State University	Astronomy	M.S., 2017
Advisor: Dr. Laura Lopez		
Harvey Mudd College	Physics	B.S., 2015
Advisor: Dr. Ann Esin		

### Honors and Awards

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PI, <i>Chandra</i> Observing Proposal (\$53,000), Cycle 24	2022
Title: “ <i>Measuring Neutron Star Proper Motions with Chandra</i> ”	
Harvard Future Faculty Fellowship, <i>CfA</i>	Sept 1, 2021–Present
Dean’s Distinguished University Dissertation Year Fellowship, <i>OSU</i>	2020–2021
Co-PI, <i>Chandra</i> Archival Proposal (\$53,000), Cycle 21	2019
Title: “ <i>Quantifying Heavy Element Asymmetries in SNRs with Chandra</i> ”	
Dean’s Distinguished University Fellowship, <i>OSU Astronomy Dept</i>	2015–2017
President’s Scholarship Program (4-year scholarship at <i>Harvey Mudd College</i> )	2011–2015

### Presentations (12 talks, 5 poster presentations)

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“ <i>Ejecta Mass Ratios in Kepler’s SNR &amp; Fitting Highly Complex Global SNR Spectra</i> ”	
20th HEAD Meeting, Poster Presentation	March 2022
“ <i>Constraining SNR explosion properties from X-ray-emitting shocked ejecta</i> ”	
239th AAS Meeting, Talk	January 2022
“ <i>Demographics of Neutron Stars in Supernova Remnants</i> ”	
Supernova Remnants and Their Progenitors Workshop, Invited Talk	August 2022
“ <i>Supernova Remnant Typing through X-ray Emission Line Morphology</i> ”	
<i>Chandra</i> Data Science Workshop, Invited Talk	August 2021
“ <i>Probing Ejecta Asymmetries in Core-Collapse SNRs</i> ”	
Carnegie Observatories Lunch Talk	Spring 2021
237th AAS Meeting, Talk	Winter 2021
KIPAC Tea Talk, Invited Talk	Fall 2020
University of Michigan High Energy Seminar, Invited Talk	Fall 2020
CfA Galaxies & Cosmology & Stars & Planets Seminar Series, Talk	Fall 2020
“ <i>Measuring the Asymmetries of Heavy Elements in the Supernova Remnant Cassiopeia A</i> ”	

20 Years of <i>Chandra</i> Meeting, Poster Presentation	Winter 2019
SNRs II Meeting in Crete, Greece, Talk	Summer 2019
17th HEAD Meeting, Poster Presentation	Spring 2019
“ <i>Asymmetries of Heavy Elements in Cassiopeia A</i> ” NSBP Conference, Talk	Fall 2018
“ <i>Comparing Neutron Star Kicks to Supernova Remnant Asymmetries</i> ” 16th HEAD Meeting, Poster Presentation	Summer 2017
“ <i>Using Neutron Star Kick Velocities to Investigate Supernova Remnant Asymmetries</i> ” SNR Workshop at Niels Bohr Institute, Copenhagen, Denmark, Talk	Summer 2017
SNR Workshop at UC Santa Cruz, Talk	Spring 2017
“ <i>Comparing Neutron Star Kicks to Supernova Remnant Asymmetries</i> ” SACNAS National Conference, Poster Presentation	Fall 2016
2nd Universidad de Católica-OSU Workshop, Chile, Talk	Spring 2016

### Teaching and Service Experience

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Postdoc Council (PDC) Member, CfA   Harvard & Smithsonian	2022–
Teaching Assistant, Astronomy Department, OSU	2018-2019
<i>Astronomy Lab</i> (General Education)	3 semesters
<i>Black Holes</i> (General Education)	2 semesters
<i>Life in the Universe</i> (General Education)	2 semesters
Presenter, OSU <i>Arne Slettebak Planetarium</i> , 5 shows	2016-2019
Public and Astronomy Class Attendees	
Organizer, OSU Graduate Student Summer Colloquium	Summer 2018
Co-organizer, OSU Graduate Student Order of Magnitude (GOOM) Class	2017-2018
OSU Astronomy Public Outreach	Summer 2016
<i>Cosmic Cratering</i> activity at Columbus’ Upper Arlington Public Library	
LBT Observing, 5 nights	June 2016

### Refereed Journal Publications (4 First Author)

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9. **\*\*Holland-Ashford, T.**, Slane, P., Lopez, L. A., Auchettl, K., Kashyap, V., *Estimating Ejecta Mass Ratios in Kepler’s SNR: Global X-Ray Spectral Analysis Including Suzaku Systematics and Emitting Volume Uncertainties* Accepted to ApJ (08/2022), arXiv: 2308.15527
8. Cronin, S. A., Utomo, D., Leroy, Adam K., Behrens, E. A., Chastenet, J., **Holland-Ashford, T.**, Koch, E. W., Lopez, L. A., Sandstrom, K M., Williams, T. G. *Local Environments of Low-redshift Supernovae*, 2021, ApJ, 923, 86C, arXiv: 2109.07453
7. Martínez-Rodríguez, H., Lopez, L. A., Auchettl, K., Badenes, C., **Holland-Ashford, T.**, Patnaude, D. J., Lee, S.-H., Foster, A. R., Slane, P. O., *Evidence of a Type Ia Progenitor for Supernova Remnant 3C 397*, 2020, Submitted to ApJ (06/2021), arXiv: 2006.08681
6. **\*\*Holland-Ashford, T.**, Lopez, L. A., Auchettl, K., *Spatially-Resolved Study of Recombining Plasma in W49B Using XMM-Newton*, 2020, ApJ, 903, 108H, arXiv: 2007.11593

5. Picquenot, A., Acero, F., **Holland-Ashford, T.**, Lopez, L. A., Bobin, J., *Three-dimensional Morphological Asymmetries in the Ejecta of Cassiopeia A Using a Component Separation Method in X-rays*, 2020, A&A, 646A, 82P, arXiv: 2102.01507
4. **\*\*Holland-Ashford, T.**, Lopez, L. A., Auchettl, K., *Asymmetries of Heavy Elements in the Young Supernova Remnant Cassiopeia A*, 2020, ApJ, 889, 114H, arXiv: 1904.06357
3. Stafford, J. N., Lopez, L. A., Auchettl, K., **Holland-Ashford, T.** “*The Age Evolution of the Radio Morphology of Supernova Remnants*”, 2019, ApJ, 884, 113S, arXiv: 1808.08234
2. Auchettl, K., Lopez, L. A., Badenes, C., Ramirez-Ruiz, E., Beacom, J. F., **Holland-Ashford, T.**, “*Measurement of the Core-collapse Progenitor Mass Distribution of the Small Magellanic Cloud*”, 2019, ApJ, 871, 64, arXiv: 1804.10210
1. **\*\*Holland-Ashford, T.**, Lopez, L. A., Auchettl, K., Temim, T., Ramirez-Ruiz, E., “*Comparing Neutron Star Kicks to Supernova Remnant Asymmetries*”, 2017, ApJ, 844, 84, arXiv: 1705.08454