

# JACK M. M. NEUSTADT

Ph.D. candidate in Astronomy ◇ the Ohio State University  
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## FIRST-AUTHOR PUBLICATIONS

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- Neustadt et al. 2023, “Constraints on pre-SN outbursts from the progenitor of SN 2023ixf using the Large Binocular Telescope”, arXiv:2306.06162, submitted to MNRAS
- Neustadt et al. 2023, “Multiple flares in the changing-look AGN NGC 5273”, MNRAS, 521, 3810
- Neustadt & Kochanek 2022, “Using AGN lightcurves to map accretion disc temperature fluctuations”, MNRAS, 513, 1046
- Neustadt et al. 2021, “The search for failed supernovae with the Large Binocular Telescope: a new candidate and the failed SN fraction with 11 yr of data”, MNRAS, 508, 516
- Neustadt et al. 2020, “To TDE or not to TDE: the luminous transient ASASSN-18jd with TDE-like and AGN-like qualities”, MNRAS, 494, 2538
- Neustadt et al. 2017, “Detection of optical emission associated with the Galactic SNR G64.5+0.9”, MNRAS, 469, 516

## OTHER PUBLICATIONS

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- Rizzo-Smith et al. 2022, “The Late Time Optical Evolution of Twelve Core-Collapse Supernovae: Detection of Normal Stellar Winds”, MNRAS, 521, 1474 (**3<sup>rd</sup>** of **3** authors)
- Holoien et al. 2022, “Investigating the Nature of the Luminous Ambiguous Nuclear Transient ASASSN-17jz”, ApJ, 933, 196 (**2<sup>nd</sup>** of **30** authors)
- Hinkle et al. 2022, “The Curious Case of ASASSN-20hx: A Slowly-Evolving, UV and X-ray Luminous, Ambiguous Nuclear Transient”, ApJ, 930, 12 (**4<sup>th</sup>** of **24** authors)
- Tucker et al. 2021, “An AMUSING look at the host of the periodic nuclear transient ASASSN-14ko reveals a second AGN”, MNRAS, 506, 6014 (**4<sup>th</sup>** of **13** authors)
- Andrews et al. 2021, “The Blue Supergiant Progenitor of the Supernova Imposter AT 2019krl”, ApJ, 917, 63 (**5<sup>th</sup>** of **23** authors)
- Payne et al. 2021, “ASASSN-14ko is a Periodic Nuclear Transient in ESO 253-G003”, ApJ, 910, 125 (**10<sup>th</sup>** of **27** authors)
- Hinkle et al. 2020, “Discovery and Follow-up of ASASSN-19dj: An X-ray and UV Luminous TDE in an Extreme Post-Starburst Galaxy”, MNRAS, 500, 1673 (**5<sup>th</sup>** of **31** authors)
- Holoien et al. 2019, “Discovery and Early Evolution of ASASSN-19bt, the First TDE Detected by TESS”, ApJ, 883, 111 (**14<sup>th</sup>** of **26** authors)
- Fesen et al. 2019, “Detection of extensive optical emission from the extremely radio faint Galactic supernova remnant G182.4+4.3”, MNRAS, 486, 4701 (**2<sup>nd</sup>** of **4** authors)
- How et al. 2018, “Optical emission associated with the Galactic supernova remnant G179.0+2.6”, MNRAS, 478, 1987 (**4<sup>th</sup>** of **5** authors)
- Fesen et al. 2017, “A Distance Estimate to the Cygnus Loop based on the Distances to Two Stars Located Within the Remnant”, MNRAS, 469, 516 (**2<sup>nd</sup>** of **4** authors)
- Fesen et al. 2015, “Discovery of an Apparent High Latitude Galactic Supernova Remnant”, ApJ, 812, 37 (**2<sup>nd</sup>** of **4** authors)
- Graur et al. 2014, “Type-Ia Supernova Rates to Redshift 2.4 from CLASH: The Cluster Lensing And Supernova Survey with Hubble”, ApJ, 783, 28 (**39<sup>th</sup>** of **41** authors)

## INVITED TALKS

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- 2022/04, “Using AGN lightcurves to map accretion disc temperature fluctuations”, AGN Seminar, University of Kansas, Department of Physics & Astronomy

## MEETING ABSTRACTS

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- Neustadt et al. 2023, “Looking beyond the lamppost: a new method of understanding AGN continuum variability”, The Restless Nature of AGN: 10 years later (**Talk**)

- Neustadt et al. 2023, “Multiple flares in the changing-look AGN NGC 5273”, eXtreme Black Holes, (**Poster**)
- Neustadt & Kochanek 2022, “Looking under the lamppost: a new model of AGN continuum variability”, AAS 241, 111.08 (**Talk**)
- Neustadt & Kochanek 2022, “Using AGN lightcurves to map accretion disc temperature fluctuations”, PoSTER 2022, 607 (**Poster**)
- Neustadt, J. M. et al. 2021, “The search for failed supernovae with the Large Binocular Telescope: the failed SN fraction and new candidates with 11 yr of data ”, AAS 237, 409.03 (**Talk**)
- Neustadt, J. M. 2020, “To TDE or not to TDE: The luminous transient ASASSN-18jd with TDE-like and AGN-like qualities”, AAS 235, 304.28 (**Poster**)
- Neustadt, J. et al. 2017, “Optical Observations of Galactic Supernova Remnant G64.5+0.9”, AAS 229, 148.06 (**Poster**)

## MENTORING EXPERIENCE

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- **Polaris Mentoring Program**  
Mentor to OSU undergraduates majoring in Physics/Astronomy January 2019 – ongoing
- **Ohio Supercomputer Center Summer Institute**  
Assistant instructor w/ Prof. Adam Leroy June 2019

## LEADERSHIP EXPERIENCE

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- **Polaris Mentoring Program - Leadership Committee**  
Created and edited curriculum for Polaris Mentoring Program (PHYSICS 2050) August 2022 – ongoing

## WORKSHOPS ATTENDED

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- 2022/08, NICER Proposal and Science Workshop 2022, online
- 2022/08, NASA Physics of the Cosmos (PCOS) Time Domain And Multi-Messenger (TDAMM) Initiative Workshop, Annapolis, MD; presented work as ePoster

## AWARDED TELESCOPE TIME

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- *Neil Gehrels Swift Observatory* – 120 ks
- *Neutron Star Interior Composition Explorer (NICER)* – 20 ks

## REFeree EXPERIENCE

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- *Nature Astronomy*
- Monthly Notices of the Royal Astronomical Society (MNRAS)
- Canada France Hawaii Telescope - Canadian Time Allocation Committee

## OBSERVING EXPERIENCE

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- **Large Binocular Telescope** Mount Graham International Observatory, AZ  
41 nights, operated remotely, using LBC, MODS, and LUCI
- **McGraw-Hill 1.3m Telescope** MDM Observatory, Kitt Peak, AZ  
30+ nights, operated on-site and remotely, using direct imaging
- **Hiltner 2.4m Telescope** MDM Observatory, Kitt Peak, AZ  
5 nights, operated on-site, using direct imaging and OSMOS
- **Radcliffe 1.9m Telescope** SAAO, Sutherland, SA  
5 nights, operated on-site, using SHOC

## EDUCATION

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- **The Ohio State University** Columbus, OH  
Ph.D. student in Astronomy Ongoing  
Overall GPA: 4.00/4.00

– **Dartmouth College**  
B.A. in Physics, Minors: Astronomy, Japanese  
Overall GPA: 3.87/4.00

Hanover, NH  
June 2017  
Phi Beta Kappa, *Magna Cum Laude*

## ACADEMIC HONORS & AWARDS

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– International Travel Grant (AAS)	June 2023
– Extended Dean’s Distinguished University Fellowship (OSU)	2018–21, 2023-24
– 2 <sup>nd</sup> place in Mathematical & Physical Sciences - Hayes Graduate Research Forum (OSU)	April 2021
– Dorrit Hoffleit Undergraduate Research Scholarship (Yale University)	Summer 2017
– High Honors in Physics (Dartmouth)	Spring 2017
– NASA Space Grant (Dartmouth)	Spring 2015, Winter & Spring 2017
– Denis G. Sullivan Fund for Undergraduate Research (Dartmouth)	Spring 2016
– James O. Freedman Presidential Scholar (Dartmouth)	Fall 2015 & Winter 2016