

# Carrie E. Holt

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Pronouns: she/her/hers  
Citizenship: USA

## EDUCATION

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<b>Ph.D. in Astronomy</b> University of Maryland <i>“The Evolution of Small Bodies on Extreme Orbits”</i> Advisors: Prof. Matthew Knight (USNA) & Prof. Derek Richardson	Fall 2023 (anticipated) <i>College Park, MD</i>
<b>M.S. in Astronomy</b> University of Maryland <i>“Continuous Monitoring of Spatial Variations in 103P/Hartley 2’s Volatiles from Deep Impact”</i> Advisors: Prof. Jessica Sunshine & Dr. Lori Feaga	Dec 2018 <i>College Park, MD</i>
<b>B.S. in Physics</b> Wagner College <i>Magna Cum Laude with Honors</i>	May 2014 <i>Staten Island, NY</i>

## PROFESSIONAL EXPERIENCE

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<b>Graduate Research Assistant</b> Dept of Astronomy, University of Maryland	Aug. 2016 – present <i>College Park, MD</i>
<b>Graduate Teaching Assistant</b> Dept of Astronomy, University of Maryland	Aug. 2016 – May 2022 <i>College Park, MD</i>
<b>Faculty Specialist</b> Dept of Astronomy, University of Maryland	Sep. 2015 – Aug. 2016 <i>College Park, MD</i>
<b>NASA Summer Intern</b> NASA Goddard Space Flight Center	June 2013 – Aug. 2013 <i>Greenbelt, MD</i>

## PUBLICATIONS

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- [6] *Orbital Period Change of Dimorphos Due to the DART Kinetic Impact.*  
Thomas, C.A., et al. (including **Holt, C.E.**), 2022. Nature, in review.
- [5] *Surface Properties of Near-Sun Asteroids.*  
**Holt, C.E.**, Knight, M.M., Kelley, M.S.P., Ye, Q., Hsieh, H., et al., 2022. [PSJ, 3, 8](#)
- [4] *The LCO Outbursting Objects Key Project: Overview and Year 1 Status.*  
Lister, T., Kelley, M.S.P., **Holt, C.E.**, et al. 2022. [PSJ, 3, 7](#)
- [3] *Distant Outbursts of Comet C/2014 UN<sub>271</sub> (Bernardinelli-Bernstein)*  
Kelley, M.S.P., Kokotanekova, R., **Holt, C.E.**, Protopapa, S., Lister, T., et al. 2022. [ApJL, 933, L44](#)
- [2] *Recovery of Returning Halley-Type Comet 12P/Pons-Brooks With the Lowell Discovery Telescope.*  
Ye, Q., Farnham, T.L., Knight, M.M., **Holt, C.E.**, & Feaga, L.M. 2020. [RNAAS, 4, 7](#)
- [1] *Investigating the Nature of Late-time High-energy GRB Emission through Joint Fermi/Swift Observations.*  
Ajello, M., et al. (including **Holt, C.**) 2018. [ApJ, 863, 138](#)

## CIRCULARS & TELEGRAMS

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- [6] *Rotation period of comet C/2022 E3 ZTF from CN morphology.*  
Knight, M.M., **Holt, C.E.**, Villa, K.M., Skiff, B.A., & Schleicher, D.G. 2022. [ATel 15879](#)
- [5] *Small Apparent Outburst of Comet 73P/Schwassmann-Wachmann 3.*  
Kelley, M.S.P, Lister, T., & **Holt, C.E.** on behalf of the LCO Outbursting Objects Key Project. 2022. [ATel 15560](#)
- [4] *Disintegration of Near-Sun Comet C/2021 O3 (PANSTARRS)*  
Zhang, Q. Ye, Q., Farnham, T.L., & **Holt, C.E.** 2022. [ATel 15358](#)
- [3] *Comet C/2021 G2.*  
**Holt, C.**, (and measured by Micheli, M.). 2021. CBET 5057
- [2] *Apparent Outburst of Comet C/2014 UN271 (Bernardinelli-Bernstein).*  
Kelley, M.S.P, Lister, T., & **Holt, C.E.** on behalf of the LCO Outbursting Objects Key Project. 2021. [ATel 14917](#)
- [1] *Comet 12P/PONS-BROOKS.*  
Knight, M.M., **Holt, C.E.**, Ye, Q-Z., Feaga, L.M., Kelley, M.S.P., Shumar, L., Sanborn, J., & Hayslip, A. (and measured by Ye and Farnham, T.L.). 2020. CBET 4805

## REFEREED ARCHIVED DATASETS

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- [1] **Holt, C.E.**, Knight, M.M., & Ye, Q., “Ground-based optical imaging of near-Sun asteroids V1.0”, [urn:nasa:pds:bundle\\_tbd](#), NASA Planetary Data System, submitted.

## HONORS & AWARDS

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- Future Investigators in NASA Earth and Space Science & Technology Fellowship, *NASA* (2022)
- ProAm Comet Workshop Travel Grant, *Europlanet Society* (2022)
- Summer Research Fellowship, *University of Maryland* (2021)
- The Jacob K. Goldhaber Travel Grant, *University of Maryland* (2018)
- NASA Group Achievement Award, *Rosetta Alice Instrument Team* (2017)
- Philip E. Angerhofer Outstanding Graduate Teaching Assistant, *UMD Astronomy Dept.* (2016)
- Harvey Logan Memorial Award in Physics, *Wagner College* (2014)
- Excellence in Physics Award, *Eastern Colleges Science Conference* (2014)

## MISSION INVOLVEMENT

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- DART, *Investigation Team Member* (2022 - present)
- Comet Interceptor, *Science Team Associate* (2022)
- Rosetta, *Alice UV spectrograph team* (2015 - 2016)

## OBSERVING EXPERIENCE

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- SOAR (remote and robotic)
- Lowell Discovery
- Lowell 42-in
- Lowell 31-in (robotic)
- Las Cumbres (robotic)

## SUCCESSFUL TELESCOPE PROPOSALS

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SOAR	<b>PI</b>	(30 hrs classical)	2023A
	<b>PI</b>	(66 hrs robotic)	2022A, 2022B, 2023A
	Co-I (PI: M. M. Knight)	(60 hrs robotic)	2021A, 2021B
LDT	<b>PI</b>	(5 hrs classical)	2023A
	Co-I (PI: Ye, Knight, Kelley, Feaga)	(> 200 hrs classical)	2019B – 2023A
VLT	Co-I (PI: C. Snodgrass)	(11 hrs robotic)	2022A
Lowell 31-in	<b>PI</b>	(20 hrs robotic)	2020A

## SCIENTIFIC PRESENTATIONS

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### INVITED TALKS

- “*Activity of Oort Cloud Comets*”  
Lowell Observatory Colloquium. Flagstaff, AZ. January 2023
- “*Activity of Oort Cloud Comets*”  
USNA Physics Brown Bag Seminar. Annapolis, MD. October 2022
- “*Activity of Oort Cloud Comets*”  
Institute for Astronomy Coffee Talk. Edinburgh, UK. June 2022
- “*Activity of Oort Cloud Comets*”  
NOIRLab Friday Scientific Lunch Talks (FLASH). NOIRLab. Virtual. April 2022
- “*Activity of Oort Cloud Comets*”  
UMD Planetary and exoplanetary Astronomy Lunch Seminar (PALS). College Park, MD. April 2022
- “*Spatial Variations of Comet 103P/Hartley 2’s Volatiles: Three Weeks of Deep Impact Data*”  
UMD Planetary Astronomy Late-morning Seminar (PALS). College Park, MD. April 2018

### CONTRIBUTED TALKS

- “*Surface Properties of Near-Sun Asteroids*”  
Lowell Discovery Telescope Partners’ Meeting. virtual. November 2022
- “*Monitoring the activity of distant comets*”  
Division of Planetary Science. London, Canada. October 2022
- “*The LCO Outbursting Objects Key (LOOK) Project*”  
Comet ProAm Workshop. Prague, Czech Republic. June 2022
- “*Small Perihelion Effects on Near-Sun Asteroids*”  
Planetary Defense Conference. Virtual. April 2021
- “*Small Perihelion Effects on Near-Sun Asteroids*”  
Division of Planetary Science. Virtual. October 2020
- “*Small Perihelion Effects on Near-Earth Objects*”  
Division of Planetary Science/European Planetary Science. Geneva, Switzerland. September 2019
- “*Continuous Monitoring of Spatial Variations in 103P/Hartley 2’s Volatiles from Deep Impact*”  
Division of Planetary Science. Knoxville, TN. October 2018
- “*Lack of High-Energy Afterglows of Gamma-ray Burst*”  
Eastern Colleges Science Conference. Poughkeepsie, NY. March 2014

## POSTERS

- “*Characterizing newly discovered distant comets*”  
Division of Planetary Science Conference. Virtual. October 2021
- “*Using Deep Impact to Continuously Monitor Spatial Variations in 103P/Hartley 2’s Volatiles*”  
American Geological Union. Washington, D.C. December 2018
- “*Missing High Energy Afterglows of Gamma-ray Bursts*”  
American Astronomical Society. Washington, D.C. January 2014

## TEACHING EXPERIENCE

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<b>Teaching Assistant</b> ASTR220 “Collisions in Space – The Threat of Asteroid Impacts”	University of Maryland <i>Fall 2021-Spring 2022</i>
<b>Teaching Assistant</b> MATH 115 “Precalculus”	University of Maryland <i>Fall 2018</i>
<b>Teaching and Lab Assistant</b> ASTR 101 “Introduction to Astronomy”	University of Maryland <i>Fall 2018-Spring 2019</i>
<b>Lab Assistant</b> “Elements of Physics I & II”	Wagner College <i>Fall 2013-Spring 2014</i>

## STUDENTS ADVISED

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- **Felix Forcho**, Prince George’s Community College, “*Activity of Near-Sun Asteroids*”  
Winter 2020, as part of UMD’s GRADMAP outreach program.

## PROFESSIONAL SERVICE & MEMBERSHIPS

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Referee for	Planetary Science Journal
Executive Secretary	NASA Review Panel
Committee Service	UMD Dept. of Astronomy Graduate Student Council Rep., 2017–2021
Member	LSST Solar System Science Collaboration (SSSC), 2022 International Space Science Institute (ISSI) International Team, “The Life Cycle of Comets”, 2021 The LCO Outbursting Objects Key (LOOK) Project Collaboration, 2020
Society Membership	American Astronomical Society, Graduate Student Member

## POPULAR MEDIA

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- “*A green comet is visiting us from the edge of the solar system, and astronomers are thrilled*”  
Popular Science. [online](#). January 2023
- “*What the Green Comet Tells Us About the Past—and the Future*”  
The New Yorker. [online](#). January 2023
- *Interview on C/2022 E3 (ZTF)*  
90.3 kazu (regional npr). *radio*. January 2023