

Matthew M. Knight

CONTACT INFORMATION

Lowell Observatory*
1400 W. Mars Hill Rd
Flagstaff, AZ 86001
U.S.A.

Phone: (928) 774-3358
Fax: (928) 774-6296
Home: (301) 906-2065
E-mail: knight@lowell.edu
Webpage: <http://www2.lowell.edu/users/knight>

**As of June 2011, I am a long-term visitor at Johns Hopkins University Applied Physics Laboratory. However, Lowell Observatory remains my employer and primary mailing address.*

EDUCATION

University of Maryland, College Park, MD USA

Ph.D. Astronomy, 2008
• Dissertation Topic: “Studies of SOHO Comets”
• Advisor: Michael A’Hearn
M.S., Astronomy, May 2003

University of Virginia, Charlottesville, VA USA

B.S., Physics with Distinction, May 2000

RESEARCH EXPERIENCE

Assistant Research Scientist, Lowell Observatory

September 2012–present

Postdoctoral Research Associate, Lowell Observatory

July 2008–September 2012

Graduate Research Assistant, University of Maryland

June 2002–July 2008

Undergraduate Research Assistant, University of New Mexico (REU)

Summer 1999

Undergraduate Research Assistant, University of Virginia

Summer 1998

SUCCESSFUL FUNDING PROPOSALS

“Quantitative Studies of Comet Comae and Nuclei” PI: D. Schleicher. Role: Co-I. Commitment 6.0 mo/yr for 4 years. Funded by NASA Planetary Astronomy, 2013. Total Amount \$800K.

“Modeling Jet Morphologies in the Comae of Comets 103P/Hartley 2 and Lulin (2007 N3)” PI: D. Schleicher. Role: Co-I. Commitment 2.0 mo/yr for 3 years. Funded by NASA Planetary Atmospheres, 2013. Total Amount \$279K.

“Travel Support for Coordinated Investigations of Comets” **PI: M.M. Knight**. Funded by NASA Headquarters, 2014. Total Amount: \$5K.

“Imaging Polarimetry of the 2013 Comet ISON with ACS: A Study of the Heterogeneous Coma” PI: D. Hines. Role: Co-I. Commitment 2.0 mo/yr for 1 year. Funded by Space Telescope Science Institute, 2013. Total Amount: \$23K.

“Hubble Imaging of the Nucleus of Comet ISON” PI: P. Lamy. Role: Co-I. Commitment 1.0 mo/yr for 1 year. Funded by Space Telescope Science Institute, 2013. Total Amount: \$13K.

“The First Pre-Perihelion Nucleus Size Measurement of a Sungrazing Comet, C/2012 S1 (ISON)” PI: J.-Y. Li. Role: Co-I. Commitment 0.5 mo/yr for 1 year. Funded by Space Telescope Science Institute, 2013. Total Amount: \$5K.

“Investigations of Comets Observed by SOHO and STEREO” PI: **M.M. Knight**. Role: PI. Commitment: 4.8 mo/yr for 3 years. Funded by NASA Outer Planets Research Program, 2012. Total Amount: \$187K.

“High Spatial Resolution Photometric Imaging of the Area Around the Nucleus of C/2011 W3 Lovejoy” PI: **M.M. Knight**. Role: PI. Commitment: 0.74 mo/yr for 1 year. Funded by Space Telescope Science Institute, 2012. Total Amount: \$8K.

“Finding Interior Earth Objects in STEREO data” PI: C.I. Fuentes. Role: Co-I. Commitment: 0.0 mo/yr for 3 years. Funded by NASA Near Earth Object Observations Program, 2011. Total

Amount: \$211K.

“Quantitative Analyses of Gas and Dust Coma Morphologies in Comets” PI: D.G. Schleicher. Role: Postdoc. Commitment: 6.6 mo/yr for 3 years. Funded by NASA Planetary Astronomy Program, 2010. Total amount: \$290K.

“Study of Sungrazing Comets Observed by SOHO and STEREO” PI: **M.M. Knight**. Role: PI. Commitment: 4 mo/yr for 3 years. Funded by NASA Planetary Mission and Data Analysis Program, 2009. Total amount: \$145K.

“Groundbased Cometary Studies” PI: D.G. Schleicher. Role: Postdoc. Commitment: 1.4 mo/yr for 3 years. Funded by NASA Planetary Astronomy Program, 2008. Total amount: \$535K.

“Studies of SOHO Comets” PI: M.F. A’Hearn. Role: Graduate Student. Commitment: 12 mo/yr for 3 years. Funded by NASA Planetary Atmospheres Program, 2005. Total amount: \$195K.

REFEREED
PUBLICATIONS

Knight, M.M. and Schleicher, D.G. 2014. Observations of Comet ISON (C/2012 S1) from Lowell Observatory. *The Astronomical Journal*, in press.

Knight, M.M. and Battams, K. 2014. Preliminary Analysis of SOHO/STEREO Observations of Sungrazing Comet ISON (C/2012 S1) Around Perihelion. *ApJL*, 782, L37 (5pp). arXiv:1401.7028

Li, J.-Y., Kelley, M.S.P., **Knight, M.M.**, Farnham, T.L., Weaver, H.A., A’Hearn, M.F., Mutchler, M.J., Kolokolova, L., Lamy, P., Toth, I. 2013. Characterizing the Dust Coma of Comet C/2012 S1 (ISON) at 4.15 AU from the Sun. *ApJL*, 779, L3 (5pp). arXiv:1311.0826

Hines, D.C., Videen, G., Zubko, E., Muinonen, K., Shkuratov, Y., Kaydaash, V.G., **Knight, M.M.**, Sitko, M.L., Lisse, C.M., Mutchler, M., Hammer, D., Yanamandra-Fisher, P.A. 2013. Hubble Space Telescope Pre-Perihelion ACS/WFC Imaging Polarimetry of Comet ISON (C/2012 S1) at 3.81 AU. *ApJL*, 80, L32 (6pp).

Schleicher, D.G., **Knight, M.M.**, Levine, S.E. 2013. The Nucleus of Comet 10P/Tempel 2 in 2013 and Consequences Regarding Its Rotational State: Early Science from the Discovery Channel Telescope. *The Astronomical Journal*, 146:137 (8pp). arXiv:1309.2288

Knight, M.M. and Walsh, K.J. 2013. Will Comet ISON (C/2012 S1) Survive Perihelion? *The Astrophysical Journal*, 776, L5 (5pp). arXiv:1309.2944

Lamy, P., Faury, G., Llebaria, A., **Knight, M.**, A’Hearn, M.F., Battams, K. 2013. Sunskirting Comets Discovered with the LASCO Coronagraphs Over the Decade 1996-2008. *Icarus*, 226, 1350-1398.

Knight, M.M. and Schleicher, D.G. 2013. The Highly Unusual Outgassing of Comet 103P/Hartley 2 from Narrowband Photometry and Imaging of the Coma. *Icarus*, 222, 691-706. arXiv:1206.1318.

Lisse, C.M., Christian, D.J., Wolk, S., Bodewits, D., Dennerl, K., Combi, M., Lepri, S., Zurbuchen, T., Dello Russo, N., **Knight, M.M.** 2013. Chandra ACIS-S Imaging Spectroscopy of Rotationally Modulated X-ray Emission From Comet 103P/Hartley 2 During the EPOXI Encounter. *Icarus*, 222, 752-765.

Knight, M.M., Schleicher, D.G., Farnham, T.L., Schwieterman, E.W., Christensen, S.R. 2012. A Quarter-Century of Observations of Comet 10P/Tempel 2 at Lowell Observatory: Continued Spin-Down, Coma Morphology, Production Rates, and Numerical Modeling. *The Astronomical Journal*, 144:153 (25pp). arXiv:1210.1228.

Hsieh, H.H. and 38 colleagues (including **Knight, M.M.**). 2012. Observational and Dynamical Characterization of Main-Belt Comet P/2010 R2 (La Sagra). *The Astronomical Journal*, 143:104 (16pp). arXiv:1109.6350.

Knight, M.M. and Schleicher, D.G. 2011. CN Morphology Studies of Comet 103P/Hartley 2. *The*

Astronomical Journal, 141:183 (14pp). arXiv:1103.5466. [June 2011 AJ cover]

Meech, K.J. and 191 colleagues (including **Knight, M.M.**). 2011. EPOXI: Observations from a Worldwide Earth-Based Campaign. *The Astrophysical Journal Letters*, 734:L1 (9pp).

Knight, M.M., Farnham, T.L., Schleicher, D.G., Schwieterman, E.W. 2011. The Increasing Rotation Period of Comet 10P/Tempel 2. *The Astronomical Journal*, 141:2 (14pp). arXiv:1009.3019.

Knight, M.M., A'Hearn, M.F., Biesecker, D.A., Faury, G., Hamilton, D.P., Lamy, P., Llebaria, A. 2010. Photometric Study of the Kreutz Comets Observed by SOHO from 1996–2005. *The Astronomical Journal*, 139, 926–949

Farnham, T.L., Samarasinha, N.H., Mueller, B.E.A., **Knight, M.M.** 2007. Cyanogen Jets and the Rotation State of Comet Machholz (C/2004 Q2). *The Astronomical Journal*, 133, 2001–2007

Knight, M.M., Walsh, K.J., A'Hearn, M.A., Swaters, R.A., Zauderer, B.A., Samarasinha, N., Vasquez, R., Reitsema, H. 2007. Ground Based Optical and Near-IR Observations of the Deep Impact Encounter. *Icarus*, 187, 199–207

Meech, K.J. and 207 colleagues (including **Knight, M.M.**) 2005. Deep Impact: Observations from a Worldwide Earth-Based Campaign. *Science*, 310, 265–269

IAU CIRCULARS &
CENTRAL BUREAU
ELECTRONIC
TELEGRAMS

Knight, M. 2013. Comet C/2012 S1 (ISON). *CBET 3731*

Lisse, C.M., Vervack, R.J., Weaver, H.A., Bauer, J.M., Fernandez, Y.R., Kelley, M.S.P., **Knight, M.M.**, Hines, D., Li, J.-Y., Reach, W., Sitko, M.L., Yanamandra-Fisher, P.A. 2013. Comet C/2012 S1 (ISON). *CBET 3598*

Li, J.-Y., Weaver, H.A., Kelley, M.S., A'Hearn, M.F., Farnham, T.L., **Knight, M.M.**, Mutchler, M.J., Lamy, P., Toth, I. 2013. Comet C/2012 S1 (ISON). *CBET 3496*

Knight, M., Schleicher, D. 2010. Comet 103P/Hartley 2 (morphology and pole solution). *IAU Circ. 9175*

Knight, M., Schleicher, D. 2010. Comet 103P/Hartley 2 (morphology and pole solution). *CBET 2512*

Knight, M., Schwieterman, E., Schleicher, D. 2010. Comet 103P/Hartley (morphology and rotation period). *IAU Circ. 9163* (also *CBET 2418*)

Knight, M. 2010. Comet C/2010 H3 (SOHO) (photometry). *IAU Circ. 9138* (also *CBET 2256*)

Knight, M. and Schleicher, D. 2009. Comet C/2007 N3 (Lulin) (morphology, pole solution, and rotation period). *IAU Circ. 9025*

Knight, M. 2007. P/2007 R5 = 1999 R1 = 2003 R5 (SOHO) (photometry and morphology). *IAU Circ. 8872*

REFEREED
ARCHIVED
DATASETS

Knight, M.M. 2010. SOHO LASCO Comet Photometry V1.0, NASA Planetary Data System, SOHO-C-LASCO-5-KREUTZPHOTOM-V1.0

Knight, M.M. 2010. SOHO LASCO Comet Images V1.0, NASA Planetary Data System, SOHO-C-LASCO-4-COMETIMAGES-V1.0

Knight, M.M. 2010. Near-infrared Images of Comet 9P/Tempel 1 V1.0, NASA Planetary Data System, DI/EAR-C-SQIID-3-9PNIRIMAGES-V1.0

PUBLISHED
ABSTRACTS AND
CONFERENCE
PROCEEDINGS

I have published more than 40 abstracts and conference proceedings. Ten recent first author abstracts are listed below. A full list can be found at <http://www2.lowell.edu/users/knight/procs.html>.

Knight, M.M., CIOC Team. 2014. Observing campaigns for two unique comets: C/2012 S1 ISON

and C/2013 A1 Siding Spring. COSPAR Meeting 40, Abstract B0.4-35-14.

Knight, M.M. Sungrazing comets: Probing the inner extremes of the Solar System. ACM 2014. Abstract #3448.

Knight, M.M. 2013. A Review of Historical Naked-Eye Sungrazing Comets. DPS Meeting 45, Abstract #116.01.

Knight, M.M., Schleicher, D.G., Begun, J., Kelley, M.S.P., A'Hearn, M.F., Battams, K. 2013. Sungrazing Comet Potpourri: Dust Studies of SOHO/STEREO Comets and an Update on ISON (C/2012 S1). DPS Meeting 45, Abstract #407.01.

Knight, M.M., Kelley, M.S., Weaver, H.A., Fernandez, Y.R., Chesley, S.R., McNaught, R., Bode-wits, D., Lisse, C.M., Osip, D.J., Dello Russo, N., Battams, K. 2012. A Multiwavelength Investigation of the Remains of Sungrazing Comet Lovejoy (C/2011 W3). DPS 44, Abstract #514.02.

Knight, M.M., Schleicher, D.G. 2011. Photometry and Imaging of Comet 103P/Hartley 2 from Lowell Observatory. EPSC-DPS 2011, 655

Knight, M.M., Schleicher, D.G. 2011. CN Morphology of Comet 103P/Hartley 2. LPSC, 42, 2634

Knight, M.M., Schleicher, D.G. 2010. Dust and Gas Morphology of Comets 81P/Wild 2, 10P/Tempel 2, and 103P/Hartley 2. *Bull. Am. Astr. Soc.* 42, 965

Knight, M.M., Schleicher, D.G. 2009. Narrowband Observations of Comet Lulin (2007 N3). *Bull. Am. Astr. Soc.* 41, 1036

Knight, M. M., A'Hearn, M. F., Biesecker, D. A., Faury, G., Hamilton, D. P., Lamy, P., Llebaria, A. 2008. Photometry of the Kreutz Comets 1996–2005. *Bull. Am. Astr. Soc.* 40, 411

SUCCESSFUL
EXTERNAL
TELESCOPE
PROPOSALS

Telescope	Role	PI	Time Allocated/Resulting Publications
<i>Kepler</i> Campaign 2	Co-I	M. Kelley	observations scheduled
<i>Hubble</i> Cycle 22 GO	Co-I	D. Hines	22 orbits (observations scheduled)
Gemini 2014B	PI	M. Knight	20.5 hr (observations ongoing)
McMath-Pierce Solar	Co-I	J. Morgenthaler	12 days (comet too faint; data not obtained)
<i>Hubble</i> Cycle 21 GO	Co-I	P. Lamy	12 orbits (comet disintegrated; not executed)
<i>Hubble</i> Cycle 21 GO	Co-I	D. Hines	12 orbits; Hines et al. 2014, in prep.
LCOGTN	Co-I	T. Lister	36 hr
<i>Spitzer</i> Cycle 9 DDT	Co-I	C. Lisse	24 hr; Lisse et al., 2013, DPS 45, #407.06
<i>Hubble</i> Cycle 20 DDT	Co-I	J.-Y. Li	2 orbits; Li et al. 2013, ApJL, 779, L3
<i>Hubble</i> Cycle 20 DDT	Co-I	D. Hines	2 orbits; Hines et al. 2013, ApJL, 80, L32
<i>Hubble</i> Cycle 20 DDT	Co-I	M. A'Hearn	5 orbits; A'Hearn+2013, DPS 45, #407.04
<i>Swift</i>	PI	M. Knight	2 orbits; Knight et al. 2012, DPS 44, #514.02
<i>Spitzer</i> Cycle 8 DDT	PI	M. Knight	4 hr; Knight et al. 2012, DPS 44, #514.02
<i>Hubble</i> Cycle 19 DDT	PI	M. Knight	1 orbit; Knight et al. 2012, DPS 44, #514.02
JCMT	Co-I	M. Drahus	20 hr (TOO 2011B, 2012A-B, 2013A)
IRAM	Co-I	M. Drahus	11.5 hr (TOO 2011B, 2012A)

OBSERVING
EXPERIENCE

I have spent more than 160 nights at telescopes successfully obtaining data (e.g., excluding nights lost to bad weather or instrument problems). These are summarized below.

Telescope	# Nights	Type of Observations
Discovery Channel (4.3-m)	22	broadband and narrowband optical imaging
Lowell 72-in	2	broadband and narrowband optical imaging
Lowell 42-in	110+	broadband and narrowband optical imaging
Lowell 31-in (robotic)	80+	broadband and narrowband optical imaging
KPNO 4-m	9	broadband optical imaging
KPNO 2.1-m	26	near-IR, broadband and narrowband optical imaging
McMath-Pierce Solar	17 (days)	optical spectroscopy
Las Cumbres (robotic)	14	broadband and narrowband optical imaging

- PROFESSIONAL EXPERIENCE
- Since 2008, I have refereed 15 manuscripts for eight journals. These include: *The Astronomical Journal*, *The Astrophysical Journal*, *The Astrophysical Journal Letters*, *Icarus*, *Monthly Notices of the Royal Astronomical Society*, *Nature*, *Planetary and Space Science*, and *Science*.
- Referee for Origins of the Expanding Universe (conference proceedings)
- Review panelist for NASA Discovery Mission, NASA Planetary Atmospheres, Planetary Data System Small Bodies Node
- External reviewer for NASA Emerging Worlds, NASA Origins, NASA Outer Planets Research, NASA Planetary Atmospheres, NASA Planetary Mission Data Analysis, NASA Solar System Workings, European Northern Observatory CCI International Time Programmes, and CFHT CanTAC
- International Space Science Institute (ISSI) International Team co-proposer and member for “The Science of Near-Sun Comets,” Bern, Switzerland, March 3-8, 2014
- Member, NASA’s Coordinated Investigations of Comets, 2014
- Member, NASA’s Comet ISON Observing Campaign, 2013
- Co-organizer of Comet ISON Morphology Professional-Amateur collaboration, 2013
- Co-organizer of Comet ISON Observer’s Workshops, Laurel, MD, Aug 1–2, 2013 & Dec 6, 2013
- Convener of AGU special session “Sun-Grazing Comets as Solar Probes: What Goes on Behind the Occulter Disk?” Fall 2012
- Scientific Organizing Committee for “Comet Lovejoy Workshop”, Boulder, CO, March 21-22, 2012
- Co-organizer of “103P/Hartley 2 Rotation Workshop” held at NOAO, Tucson, AZ in April 2011
- Session chair for multiple sessions of AAS Division of Planetary Sciences, Lunar and Planetary Science Conference, American Geophysical Union meeting
- Maintenance of “Named Comets” website for the Committee on Small Body Nomenclature, IAU Division III, 2002–2008
- LEADERSHIP ACTIVITIES
- Colloquium co-organizer, Lowell Observatory, 2010–2011
- Website working group, Lowell Observatory, 2009
- Graduate student “Grand Poobah” (president), UMD Department of Astronomy, 2000–2008
- Captain, UMD Dept. of Astronomy intramural soccer, basketball, and football teams, 2001–2008
- Student representative, UMD Dept. of Astronomy Graduate Curriculum Review Committee, 2003
- Student representative, UMD Dept. of Astronomy Chair Search Committee, 2002
- HONORS
- Asteroid 25053 Matthewknight named in my honor (2014)
- Travel Grant, Asteroids, Comets, and Meteors Meeting (2014)
- NASA achievement award, Comet ISON Observing Campaign team (2013)
- Gold Prize, Spotlight on Graduate Research, University of Maryland (2007)
- Travel Grant, 35th SAAS-Fee Advanced Course (2005)
- U. of Maryland Center for Teaching Excellence Distinguished Teaching Ass’t (2000–2001, 2001–2002)
- U. of Maryland Department of Astronomy Outstanding Teaching Assistant (2000–2001, 2001–2002)
- INVITED TALKS
- Committee on Space Research (COSPAR) 2014
- Asteroids, Comets, and Meteors Conference 2014
- Purdue University
- European Space Research and Technology Centre, Noordwijk, Netherlands
- Max Planck Institute for Solar System Research, Göttingen, Germany
- University of Toledo
- Planetary Science Institute, Tucson, AZ
- NASA Goddard Space Flight Center Scientific Colloquium
- Southwest Research Institute, Boulder, CO
- Laboratory for Atmospheric and Space Physics, University of Colorado
- NASA Goddard Space Flight Center, Heliophysics Science Division
- Johns Hopkins University Applied Physics Laboratory
- Carnegie Institute of Washington Department of Terrestrial Magnetism
- Lowell Observatory, Flagstaff, AZ
- NASA Challenger Center, Alexandria, VA

PUBLIC TALKS	SRE Summer Intern Seminar Series, Johns Hopkins University Applied Physics Laboratory Career Paths/Survival Skills Seminar, University of Maryland Planetary Astronomy Lunchtime Seminar, University of Maryland Observatory Open House Lecture, University of Maryland NAU Outer Solar System Lunch, Flagstaff, AZ Lowell Observatory Advisory Board Meeting, Flagstaff, AZ Astronomy Unjournal Club, University of Maryland Spotlight on Graduate Research, University of Maryland Graduate Research Interaction Day, University of Maryland Intel/Hayden Planetarium student visit to the University of Maryland	
TEACHING AND OUTREACH	Visiting teacher, Baltimore ProjectASTRO (2011–2015) Judge, Lakeland Middle School (Baltimore, MD) science fair (2014) Reddit "Ask Me Anything" (2013) Public program volunteer, Lowell Observatory (2010–2011) Visiting teacher, Lowell Observatory Navajo-Hopi outreach program (2009–2010) Mentor, Northern Arizona REU program (2009) Lowell guide, UMD College Park Scholars astronomy/geology spring break trip (2009, 2011) Graduate Assistant, University of Maryland Observatory (2000–2008) Maryland Day Volunteer, University of Maryland (2001–2007) Math/science substitute teacher, Henrico County, Virginia (2001) Teaching Assistant, ASTR 100 "Introduction to Astronomy," University of Maryland (4 semesters: Fall 2000–Spring 2002)	
ADVISING EXPERIENCE	Allison Bair, Lowell Observatory research assistant <i>Supervised photometric reductions and analysis of sungrazing comets</i>	2014–current
	Michaela Fendrock, Wellesley College undergraduate student <i>Lightcurve analysis of comets 10P/Tempel 2 and 103P/Hartley 2</i>	January 2013
	Samantha Christensen, Lowell Observatory research assistant <i>Supervised image processing and analysis of comets 10P/Tempel 2 and 103P/Hartley 2. Resulted in a refereed publication</i>	2011–2013
	Edward Schwieterman, current University of Washington graduate student, former Florida Institute of Technology undergraduate student <i>Supervised photometric reductions, image processing, and analysis of comet 10P/Tempel 2; trained in optical ground-based observing. Resulted in two refereed publications</i>	Summer 2009, 2010
	Jason Begun, U. of Maryland undergraduate student <i>Supervised photometric reductions of sungrazing comets, maintenance of comet discovery database and website</i>	2009–2012
TECHNICAL SKILLS	Astronomical techniques: Planning and executing observations (optical/near-IR), Data reduction and analysis (optical/near-IR), Image enhancement, Data mining (SOHO, STEREO), Dynamical modeling (HNBody), Numerical modeling (DataDesk) Astronomical software: IRAF (optical/IR), DS9 Programming languages: IDL, C, HTML, Awk, Unix shell scripts, some Python Other software: plotting (Supermongo), Spreadsheets (Microsoft Excel, OpenOffice), Word Processing (Microsoft Word, L ^A T _E X), Operating systems (Mac OS X, Windows, Linux/Unix)	
ADDITIONAL TRAINING	Cometary Radio Astronomy Workshop (2010) 35 th SAAS-Fee Advanced Course on Trans-Neptunian Objects and Comets (2005) Kitt Peak Summer School, University of Maryland (2004) BIMA Summer School (2001)	
MEMBERSHIPS	International Astronomical Union Committee on Space Research	

American Astronomical Society
Division for Planetary Sciences of American Astronomical Society
Historical Astronomy Division of American Astronomical Society

POPULAR ARTICLES “What is the chance that Earth could pass through the debris field of Comet ISON and get a meteor shower?” *Astronomy Magazine*, August 2014
“A brief introduction to comets” *Astronomy Magazine*, November 2013 [Cover story]
“Why does ISON look green?” *The Planetary Society* guest blog, October 2013. [This and numerous other articles written for the Comet ISON Observing Campaign blog, July 2013–ongoing.]
“Comet ISON is Coming!” *Lowell Observer*, October 2013
“Could we detect a comet or asteroid hitting the Sun?” *Astronomy Magazine*, December 2012
“Comet Lovejoy.” *Lowell Observer*, June 2012
“The Survival of Comet Lovejoy (C/2011 W3), A Once in a Generation Event,” *Lowell Observatory Blog*, December 2011
“Comet Lulin Zooms By” *Lowell Observer*, December 2009
“Do You Hate Pitchers’ Won-Loss Record? Blame Your Grandfather” *Baseball Prospectus*, June 2009 (plus 5 additional articles May–June 2009)
“Sungrazing Comets” *Zenit* (The Netherlands), February 2006, p. 56–61.
I have been quoted and/or my work has been mentioned in numerous popular news stories, radio programs, and television programs. These include *Nature*, *The Wall Street Journal*, *NPR*, *BBC*, *National Geographic*, *Discovery Channel*, *Wired*, *Sky and Telescope*, *Scientific American*, *Christian Science Monitor*, *Science News*, *NASA Science News*, *Universe Today*, *Space.com*, and many newspapers.

REFERENCES Available upon request.