

W. Michael Wood-Vasey

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Research Interests: Dark Energy, Supernova Cosmology, Local Galaxy Flows, Extra-Solar Planets.

Positions

2014 – present Associate Professor of Physics and Astronomy. University of Pittsburgh.
2008 – 2014 Assistant Professor of Physics and Astronomy. University of Pittsburgh.
2004 – 2008 Postdoctoral Fellow, ESSENCE project. Harvard University.
1999 – 2004 Graduate Student Researcher and Teaching Assistant. UC Berkeley/LBNL.
1995 – 1998 Student Researcher in Hydrodynamic and Astrophysics. LLNL.

Education

Ph.D. in Physics UC Berkeley, 2004. “Rates and Progenitors of Type Ia Supernovae.”
Dissertation Advisors: Saul Perlmutter and George Smoot
M.A. in Physics University of California at Berkeley, May 2000.
B.S. in Physics; Math Harvey Mudd College (Honors), May 1998.

Major Roles in International Scientific Collaborations

2020 – present LSST Corporation Executive Board Vice Chair
2019 – present LSST Dark Energy Science Collaboration Data Coordinator
2015 – 2019 LSST Project Science Validation Scientist
2012 – 2016 LSST Dark Energy Science Collaboration Supernova Cosmology Co-Convener
2011 – 2015 SDSS-III Scientific Spokesperson
2007 – 2013 LSST Supernova Science Collaboration Co-Chair

Publications

104 refereed papers with a total of **17,449 citations**. **h-index: 54**. Full list on page 4.
10 papers with >500 citations, including one **first-author** and one **second-author** publication.

External Research Support

2019 – 2021: SLAC Dark Energy Science Collaboration \$ 65,812 to MWV
“Dark Energy Measurements Using Type Ia Supernovae in the Era of the LSST”
2018 – 2021: DOE High Energy Physics Block Grant – Co-PI \$255,000 to MWV
“Dark Energy Measurements Using Type Ia Supernovae in the Era of the LSST”
2017 – 2019: NASA/LBNL WFIRST – Co-PI \$115,000 to MWV
“Supernova Science Investigation Team”
2015 – 2019: AURA/LSST Construction Project Contract – PI \$230,000 to MWV
“LSST Science Validation Scientist”
2014 – 2019: National Institutes of Mental Health R01 – CoI \$115,000 to MWV
“Melanopsin photosensitivity and psychopathology”
2014 – 2017: DOE High Energy Physics – PI \$160,000 to MWV
“Dark Energy Measurements Using Type Ia Supernovae in the Era of the Large Synoptic Survey Telescope”

2013 – 2016: NSF Astronomy Research Grant – PI	\$500,000 to MWV
“Type Ia Supernovae in the Near Infrared – Clearing a Path through the Dust”	
2012 – 2014: Sloan Digital Sky Survey III – Elected	\$ 65,000 to MWV
Scientific Spokesperson for the SDSS-III Collaboration	
2012 – 2014: National Institutes of Mental Health R03 – CoI	\$ 7,750 to MWV
“Light Sensitivity as an Endophenotype in Seasonal Depression”	
2012 – 2013: NSF Statistics Research Grant – CoI	\$ 7,884 to MWV
"Targeted Nonparametric Methods for Dark Energy Inference"	
2010 – 2014: NSF Cyber-Enabled Discovery and Innovation – CoI	\$317,000 to MWV
“Understanding the Universe through Scalable Navigation of a Galaxy of Annotations”	

Selected Allocations of Telescope Time

WIYN, 3.5-m telescope – PI	98 nights from 2011B – 2016A
“Type Ia Supernovae in the Near-Infrared: A Three-Year Survey toward a One Percent Distance Measurement with WIYN+WHIRC”	
Hubble Space Telescope – CoI	100 orbits in Cycle 23
“RAISIN2: Tracers of cosmic expansion with SN Ia in the IR”	
Hubble Space Telescope – CoI	100 orbits in Cycle 20
“RAISIN: Tracers of cosmic expansion with SN Ia in the IR”	
Hubble Space Telescope – CoI	45 orbits in Cycle 18
“A Strong Lensing Measurement of the Evolution of Mass Structure in Giant Elliptical Galaxies”	
Magellan, 6.5-m telescope – PI	5 nights in 2008
“SNeIa in the NIR”	
Magellan, 6.5-m telescope – CoI	10 nights in 2007 – 2008
"Cluster Cosmology: SZ Comes of Age through Photo-z"	

Departmental Committees and Service

2017 – 2019	Chair, Astronomy Faculty Search Committee
2017 – 2018	Chair, Astronomy Faculty Search Committee
2017 – present	Director of Undergraduate Studies

National Committees and International Collaboration Service:

2014 – present	AAS Working Group on Time Domain Astronomy
2014 – 2017	LSST Scientific Advisory Committee
2012 – 2013	APS Division of Particles and Fields Long-Term Planning Committee: “Snowmass” Cosmic Frontiers: Dark Energy and the CMB
2012 – 2013	Committee on the Participation of Women in SDSS
2012	Space Telescope Science Institute Hubble Deep Fields Initiative
2011	SDSS-III Collaboration Council Representative for Associate Members

Honors and Awards

- 2009 “Students' Choice Award for Teaching.” Pitt College of General Studies.
- 2007, 2008 Harvard University Derek C. Bok Award for Excellence in Teaching
- 1998 – 2001 National Science Foundation Graduate Research Fellowship
- 1998 Harvey Mudd College Outstanding Thesis in Mathematics

Scientific Workshops Organized

- LSST Dark Energy Science Collaboration Meeting, Fall 2013.
- PITT PACC Workshop, March 2012: “Type Ia Supernovae in the Near Infrared”
- Aspen Summer Workshop 2010: “Taking Supernova Cosmology into the Next Decade”

Teaching and Mentoring

Graduate Students

- Daniel Perrefort, 2017 – present. Atmospheric and Optical Calibration for Supernova Surveys.
- Shu Liu, 2019 – present. Advanced Image Subtraction for wide-field surveys.
- Jared Hand, 2019 – present. Supernova host galaxies.
- Kara Ponder, 2013 – 2017. Type Ia supernova cosmology. **Graduated w/ Ph.D.** Aug '17.
- Anja Weyant, 2009 – 2014. Probing local structure with SNeIa. **Graduated w/ Ph.D.** Aug '13.
- Shailendra Vikas, 2009 – 2013. Quasar-metal correlation. **Graduated w/ Ph.D.** Apr '13.
- Melanie Good, 2009 – 2011. Extrasolar planets. **Graduated w/ MA** in '11.

Teaching

- 2019 Fall “Physics 475: Honors Physics I for Scientists and Engineers”
- 2018 Fall “Physics 1321: First-Year Seminar in Physics and Astronomy”
- 2018 Fall “Physics 475: Honors Physics I for Scientists and Engineers”
- 2017 Fall “Physics 1321: First-Year Seminar in Physics and Astronomy”
- 2017 Fall “Physics 475: Honors Physics I for Scientists and Engineers”
- 2016 Fall “Physics 1321: Computational Methods in Physics”
- 2015 Fall “Physics 1321: Computational Methods in Physics”
- 2013 Fall “Astro 89: Stars, Galaxies and the Cosmos”
- 2013 Spring “Astro 1263: Observational Techniques in Astronomy”
- 2012 Fall “Astro 1122: The Solar System and Extrasolar Planets” (**New Course**)
- 2012 Spring “Astro 89: Stars, Galaxies and the Cosmos”
- 2011 Fall “Astro 3580: Galactic and Extragalactic Astronomy”
- 2011 Spring “Astro 1263: Observational Techniques in Astronomy”
- 2010 Fall “Astro 89: Stars, Galaxies and the Cosmos”
- 2010 Spring “Astro 89: Stars, Galaxies and the Cosmos”
- 2009 Fall “Astro 2580: Galactic & Extragalactic Astronomy”
- 2009 Spring “Astro 1263: Observational Techniques in Astronomy”

Thesis Committees

I have served on 17 PhD thesis committees for graduate students not my own.

Andrew Hearing (Prof. Zentner)
Zeynep Isvan (Prof. Naples)
Chen-Dong Li (Prof. Hillier)
Dan Matthews (Prof. J. Newman)
Bin Fu (CMU: Computer Science; external member)
Jen-Feng Hsu (Prof. D'Urso)
Mark Steeger (Prof. Snoke)
Andrew Friedman (Harvard; external member)
Damon Hansen (Prof. Paolone)
Zhen Liu (Prof. Han)
Richard Ruiz (Prof. Han)
Matthew Snell (Prof. Badenes)
Abhishek Prakash. (Prof. Newman)
Kevin Wilk (Prof. Hillier)
Dritan Kodra (Prof. Hillier)
Wei Hu (Prof. Battel)
Rongpu Zhou (Prof. J. Newman)

Press and Public Outreach and Press

Outreach

- 2019 Oct The Sloan Symposium in the Carnegie Mellon School of Drama
- 2019 Jun International Dark Sky Association. Carnegie Mellon University.
"Bright Sky, Dark Sky"
- 2014 May Allegheny Observatory public lecture:
"Stars, Galaxies, and the Accelerated Expansion of the Universe"
- 2013 Nov Allegheny Observatory public lecture:
"How the Sloan Digital Sky Survey is Changing Our View of the Universe"
- 2012 Jun Planetarium and Museum of the Universe. Rio de Janeiro, Brazil.
"How the Sloan Digital Sky Survey is Changing Our View of the Universe"
- 2012 Mar Allegheny Observatory public lecture on SDSS-III.
- 2011 Dec "365 Days of Astronomy" podcast on the SDSS-III survey.
- 2011 Sep The Sloan Symposium in the Carnegie Mellon School of Drama
- 2010 Oct "The Transient Universe." Unitarium Forum.
- 2009 Oct Pitt Science Days Lecture on Allegheny Observatory.
- 2009 Oct Amateur Astronomy Association of Pittsburgh invited lecture
- 2009 May Allegheny Observatory public lecture: "The Transient Sky"
- 2009 Jun Carnegie Science Center, Cafe Scientifique:
"The Dynamic Universe: Observing the Changing Sky Throughout the Cosmos"
- 2007 Massachusetts State Science Fair judge.
- 2006 – 2013 LSST Education and Public Outreach team member
Developing plan for engaging high-school students with supernovae.
- 2006 – 2008 Educational outreach with the CfA Science Education Department
- 2006 Podcast on string theory for high school students.

Press

- 2013 Jul *Pitt News* article on SDSS-III Data Release 10.
- 2012 Aug *Pitt News* article on SDSS-III Data Release 9.
- 2012 Mar Pitt press release on joint ACT+SDSS-III kinetic SZ detection.
- 2012 Jan *Pitt Chronicle* note on election as SDSS-III Spokesperson.
- 2011 Jul Pitt A&S press, *Pittsburgh Tribune-Review* articles on CDI grant.
- 2011 Jan Pitt A&S press item on SDSS-III data release.
- 2010 Sep Pitt press release on exoplanet research
- 2010 Sep Exoplanet research featured in *Pittsburgh Tribune-Review*
- 2010 Aug Pan-STARRS1 survey work featured in *Pittsburgh Post-Gazette*
- 2010 Jul Pan-STARRS1 transient survey in *Pittsburgh Tribune-Review*
- 2010 Jul Pan-STARRS1 work featured in Pitt Chronicle
- 2009 Sep Interviewed by *SEED* magazine on dark energy and cosmology.
- 2009 Mar Interviewed by "Overnight America", KMOX, on LSST telescope
- 2009 Apr Appeared on WQED special on Allegheny Observatory, April 2, 2009.
- 2008 Aug: Interviewed by *Science Watch* about highly-cited paper

Invited Talks and Lectures

1. Subaru 20th Anniversary Meeting hosted by the National Astronomy Observatory of Japan. Waikoloa, HI. November 2020. “LSST and the Dark Energy Science Collaboration”
2. LSST Community Broker Workshop. Seattle, WA. “Pittsburgh-Google Broker”
3. LiNeA Webinar, Brazil. March 2019. “LSST and Data Facilities to Enable Science with Billions of Objects”
4. Google Pittsburgh, December 2018. “Supernovae and Dark Energy with the Large Synoptic Survey Telescope”
5. Carnegie Mellon University, June 2018. Machine Learning in Science and Engineering: Time-Domain Astrophysics track. “Using Information Theory and Machine Learning to Probe the Every-Changing Sky”
6. LSST Corporation Invited Keynote. US House Rayburn Building. April 2017. “Exploring the Universe – Bringing Discoveries to All”
7. Statistical Challenges in Modern Astronomy VI. Carnegie Mellon University, June 2016 “Supernovae, Surveys, and Statistics”
8. University of Pittsburgh. “Photo-z Workshop”, April 2016. “Supernovae”
9. Lawrence Berkeley National Laboratory, June 2015 “SweetSpot: Near-Infrared Observations of Type Ia Supernovae in the Nearby Hubble Flow”
10. Stanford University/SLAC, January 2015. “Supernovae, Surveys, and Statistics.”
11. University of California, Davis, October 2014. “Supernovae, Surveys, and Statistics.”
12. National Optical Astronomy Observatories, September 2014 “Supernovae, Surveys, Software, and Statistics.”
13. École de Physique des Houches. “Summer School: Post-Planck Cosmology.” July 2013 Two lectures on “Observational Constraints on Cosmology from Type Ia Supernovae”
14. National Optical Astronomy Observatory. “Spectroscopy in the Era of LSST.” April 2013 Invited facilitator for “Dark Energy/Cosmology” subgroup.

15. Stanford Linear Accelerator Center. Snowmass Cosmic Frontier. March 2013
“Distances with Supernovae”
16. Ohio State University, Dept. of Astronomy Colloquium. November 2012
“Taking Supernova Cosmology into the Next Decade”
17. Case Western Reserve University, Dept. of Astronomy Colloquium. October 2011
“Taking Supernova Cosmology into the Next Decade”
18. Space Telescope Science Institute, “Very Wide Field Surveys in Light of Astro 2010.”
May 2011. “Type Ia Supernovae”
19. University of Michigan, Dept. of Astronomy Colloquium. October 2010.
“Taking Supernova Cosmology into the New Decade”
20. Greater Lakes Cosmology Workshop. June 2010.
“Pan-STARRS1: Supernovae and other Transients”
21. Lyon meeting on Dark Matter and Dark Energy 2008. July 2008.
“ESSENCE: Latest Results”
22. Greater Lakes Cosmology Workshop. June 2008.
“Supernova Cosmology Past and Present”
23. UCLA, Dark Matter and Dark Energy 2008. February 2008.
“ESSENCE: Six-Year Cosmological Results”.
24. Colloquium. Department of Physics and Astronomy. University of Pittsburgh. January 2008.
“Determining the Nature of Dark Energy:
The Latest Results from ESSENCE and the Future of Observational Cosmology”
25. Colloquium. Department of Astronomy. Wesleyan University. February 2008.
“Determining the Nature of Dark Energy: The Latest Results from ESSENCE”
26. Colloquium. Kavli Institute for Theoretical Physics. University of Santa Barbara. February
2008. “Determining the Nature of Dark Energy: The Future of Observational Cosmology”
27. Yale University, Yale Center for Astronomy & Astrophysics. November 2007.
“Determining the Nature of Dark Energy with Current and Future Surveys”.
28. Brookhaven National Laboratory, Particle Physics Seminar Series. July 2007.
“Determining the Nature of Dark Energy: Cosmology with ESSENCE, Pan-STARRS, SPT,
LSST, and Other Acronyms”.

29. Kavli Institute for Theoretical Physics. Paths to Exploding Stars: Accretion and Eruption. March 2007. "Results from ESSENCE: The Similarity of Nearby and Distant SNeIa".
30. IPM Cosmology School and Workshop, Tehran, Iran. June 2007
Invited lecturer on Observational Probes of Dark Energy.
31. IAU General Assembly XXVI, Prague, The Czech Republic. August 2006.
"Thoughts on Dark Energy with Supernovae".
32. Key Approaches to Dark Energy, Barcelona, Spain. August 2006.
"Systematics and Lightcurve Fitting for Type Ia Supernova Cosmology".
33. AAS Meeting #208 Special Session, Calgary, Canada. June 2006.
"The ESSENCE of Dark Energy".

LSST and DESC Invited Talks

Much of my work over the past six years has been focused within the efforts of the LSST Construction Project and LSST DESC. Each of these efforts are large groups encompassing almost 1000 people, with about 200 at any one particular meeting. Each of these meetings has a Scientific Organizing Committee, and I report below talks I've given in response to invitations from SOCs for these meetings.

1. LSST Project and Community Workshop. Selected as the Community Parallel Workshop. August 2019. "Difference Image Analysis"
2. DESC Winter Collaboration Meeting. University of California, Berkeley. February 2019.
"Data Challenge 2: Data Access"
3. DESC Summer Collaboration Meeting. Carnegie Mellon University. July 2018.
"Dark Energy School: Verification and Validation"
"Data Access Task Force: Data Challenge 2"
4. DESC Winter Collaboration Meeting. February 2018.
"DESC & LSST Commissioning: First Discussion"
5. DESC Winter Collaboration Meeting. Stanford/SLAC. February 2017.
"LSST DM Validation and DESC"
6. LSST All-hands Meeting, Tucson, AZ. August 2014.
"The Role of Atmospheric Absorption in LSST Photometric Simulations"
7. LSST All-Hands Meeting, Tucson, AZ. August 2012
"A Discussion of Cadence in LSST"

Publication Record

**104 refereed papers with 22,730 citations total. 38 papers with >100 citations
13 papers with >500 citations: one first-author, one second-author, and two corresponding-author
h-index: 58**

(As of 2020 May 19 as compiled by the Astrophysical Data Service (ADS): <http://adsabs.harvard.edu> plus articles in Psychology and IEEE publications which are not tracked by ADS.)

Notable and Research Group Refereed Publications

1. Ponder, K. A., **Wood-Vasey, W. M.**, Weyant, A., Barton, N. T., Galbany, L., Garnavich, P., Matheson, T. **2020**. “Are Type Ia Supernovae in Restframe H Brighter in More Massive Galaxies?” *Submitted to the Astrophysical Journal*.
2. Richie, H., **Wood-Vasey, W. M.**, Coban, L. **2020**. “Disk Instabilities Caused the 2018 Outburst of AG Draconis” *Journal of the American Association of Variable Star Observers*. Vol 48, 3566.
3. Perrefort, D. J., Zhang, Y., Galbany, L., **Wood-Vasey, W. M.**, González-Gaitán, S. **2019**. “A Template-Based Approach to the Photometric Classification of SN~1991bg-like Supernovae in the SDSS-II Supernova Survey” *submitted to ApJ*. *Under revision*.
4. Perrefort, D. J., **Wood-Vasey, W. M.**, Bostroem, K. A., Gilmore, K., Joyce, R., Matheson, T., Corson, C. **2019** “pwv_kpno: A Python Package for Modeling the Atmospheric Transmission Function due to Precipitable Water Vapor”. *Publications of the Astronomical Society of the Pacific*, Vol 131, Issues 996, pp. 025002.
5. Weyant, A., **Wood-Vasey, W. M.**, Joyce, R., Allen, L., Garnavich, P. M., Jha, S. W., Kroboth, J., Matheson, T. **2018** “The First Data Release from SweetSpot: 74 Supernovae in 36 Nights on WIYN+WHIRC”. *The Astronomical Journal*, Vol 155, 201. [**9 citations**]
6. Galbany, L. *et al.* **2018** “PISCO: The PMAS/PPak Integral-field Supernova Hosts Compilation”. *The Astrophysical Journal*, Vol 855, 107. [**30 citations**]
7. Ponder, K.; **Wood-Vasey, W. M.**; Zentner A. R. **2016** “Incorporating Astrophysical Systematics into a Generalized Likelihood for Cosmology with Type Ia Supernovae” *The Astrophysical Journal*, Vol 825, 35. [**1 citation**]
8. Narayan, G. *et al.* **2016** “Light Curves of 213 Type Ia Supernovae from the ESSENCE Survey” *The Astrophysical Journal Supplements*, Vol 224, 3. [**13 citations**]
9. Aubourg, Éric *et al.* **2015** “Cosmological implications of baryon acoustic oscillation measurements”. *Physical Review D*, 92, 123516. [**361 citations**]
10. Alam, S. *et al.* (The SDSS-III Collaboration). **2015** “The Eleventh and Twelfth Data Releases of the Sloan Digital Sky Survey: Final Data from SDSS-III” *The Astrophysical Journal Supplements*, Vol 219, 12. [**1271 citations**] [Corresponding Authors: **W. M. Wood-Vasey** and M. A. Strauss]

11. Friedman, A. S.; **Wood-Vasey, W. M. et al. 2014**
"CfAIR2: Near Infrared Light Curves of 94 Type Ia Supernovae."
The Astrophysical Journal Supplements, Vol 220, 9. [42 citations]
12. Weyant, A., **Wood-Vasey, W. M.**, Allen, L., Garnavich, P. M., Jha, S. W., Joyce, R., Matheson, T. **2014** "SweetSpot: Near-Infrared Observations of Thirteen Type Ia Supernovae from a New NOAO Survey Probing the Nearby Smooth Hubble Flow".
The Astrophysical Journal, Vol 784, 105. [20 citations]
13. Ahn, C. P. et al. (The SDSS-III Collaboration). **2014**
"The Tenth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-III Apache Point Observatory Galactic Evolution Experiment".
The Astrophysical Journal Supplements, Vol 211, 17. [775 citations]
[Corresponding Authors: **W. M. Wood-Vasey** and M. A. Strauss]
14. Vikas, S.; **Wood-Vasey, W. M. et al. 2013** "Moderate CIV Absorber Systems Require $10^{12} M_{\text{Sun}}$ Dark Matter Halos at $z \sim 2.3$: A cross-correlation study of C IV absorber systems and quasars in SDSS-III BOSS DR9." *Astrophysical Journal*, Vol 768, 38. [11 citations]
15. Weyant, A.; Schafer, C.; **Wood-Vasey, W. M. 2013** "Likelihood-Free Cosmological Inference with Type Ia Supernovae: Approximate Bayesian Computation for a Complete Treatment of Uncertainty." *Astrophysical Journal*, Vol 764, 116. [41 citations]
16. Ahn, C. et al. (The SDSS-III Collaboration). **2012** "The Ninth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-III Baryon Oscillation Spectroscopic Survey." *Astrophysical Journal Supplements*, Vol 203, 21. [998 citations]
[Corresponding Authors: **W. M. Wood-Vasey** and M. A. Strauss]
17. Gezari, S.; Chornock, R.; Rest, A.; Huber, M. E.; Forster, K.; Berger, E.; Challis, P. J.; Neill, J. D.; Martin, D. C.; Heckman, T.; Lawrence, A.; Norman, C.; Narayan, G.; Foley, R. J.; Marion, G. H.; Scolnic, D.; Chomiuk, L.; Soderberg, A.; Smith, K.; Kirshner, R. P.; Riess, A. G.; Smartt, S. J.; Stubbs, C. W.; Tonry, J. L.; **Wood-Vasey, W. M.**; Burgett, W. S.; Chambers, K. C.; Grav, T.; Heasley, J. N.; Kaiser, N.; Kudritzki, R.-P.; Magnier, E. A.; Morgan, J. S.; Price, P. A. **2012** "An Ultraviolet-Optical Flare from the Tidal Disruption of a Helium-Rich Stellar Core." *Nature*, Vol 485, pp. 217–220. [282 citations]
18. Weyant, A.; **Wood-Vasey, W. M.**; Wasserman, L.; Freeman, P. **2011**
"An Unbiased Method of Modeling the Local Peculiar Velocity Field with Type-Ia supernovae." *Astrophysical Journal*, Vol 732, p. 65. [18 citations]
19. Mandel, K. S.; **Wood-Vasey, W. M. et al. 2009** "Type Ia Supernova Light-Curve Inference: Hierarchical Bayesian Analysis in the Near-Infrared." *Astrophysical Journal*, Vol 704, p. 629. [82 citations]

20. Hicken, M.; **Wood-Vasey, W. M. et al. 2009**
“Improved Dark Energy Constraints from ~100 New CfA Supernova Type Ia Light Curves.”
Astrophysical Journal, Vol 702, p. 1097. [**713 citations**]
21. **Wood-Vasey, W. M. et al. 2008** “Type Ia Supernovae are Good Standard Candles in the Near Infrared: Evidence from PAIRITEL.”
Astrophysical Journal, Vol 689, p. 377. [**125 citations**]
22. **Wood-Vasey, W. M. et al. 2007** "Observational Constraints on the Nature of the Dark Energy: First Cosmological Results from the ESSENCE Supernova Survey."
Astrophysical Journal, Vol 666, Issue 2, pp. 694 – 715. [**816 citations**]
23. **Wood-Vasey, W. M.**; Sokoloski, J. L. **2006** "Novae as a Mechanism for Producing Cavities around the Progenitors of SN 2002ic and Other SNe Ia."
Astrophysical Journal Letters, Vol 645L, p. 53. [**43 citations**]
24. **Wood-Vasey, W. M.**; Wang, L.; Aldering, G. **2004**
"Photometry of SN 2002ic and Implications for the Progenitor Mass-Loss History."
Astrophysical Journal, Vol 616, pp. 339 – 345. [**51 citations**]
25. **Wood-Vasey, W. M. et al.** "The Nearby Supernova Factory." **2004**,
New Astronomy Reviews, Vol 48, Issue 7 – 8, pp. 637 – 640. [**48 citations**]
26. **Wood-Vasey, W. M. et al. 2000**
"Computational modeling of classical and ablative Rayleigh-Taylor instabilities"
Lasers and Particle Beams, Vol 18, pp. 583 – 593. [**3 citations**]

First-Author Book Chapters

“Supernovae”, Chapter 11 of the LSST Science Book, **2009**, arXiv:0912.0201
[**247 citations**] for entire LSST Science Book

“The Future of Supernova Cosmology”, Chp 7 of
“Dark Energy: Observational and Theoretical Approaches”,
ed. Pilar Ruiz-Lapuente, **2010**, Cambridge University Press.

Dissertation

Wood-Vasey, W. M. **2004**. "Rates and Progenitors of Type Ia Supernovae."
Dept. of Physics, UC Berkeley. Dissertation Co-chairs: Saul Perlmutter and George Smoot.

First-Author Non-Refereed Publications

61 *International Astronomical Union Circulars* reporting the discovery of 83 supernovae.
8 *GRB Coordinates Network Circulars* reporting detection or upper limits for 8 GRBs.

Additional Refereed Journal Articles

1. Scolnic, D. M. *et al.* **2018**. “The Complete Light-curve Sample of Spectroscopically Confirmed SNe Ia from Pan-STARRS1 and Cosmological Constraints from the Combined Pantheon Sample” *The Astrophysical Journal*, Vol 859, 101. **[451 citations]**
2. Abolfathi, B. *et al.* **2018**. “The Fourteenth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the Extended Baryon Oscillation Spectroscopic Survey and from the Second Phase of the Apache Point Observatory Galactic Evolution Experiment” *The Astrophysical Journal Supplement*, Vol 235, 42. **[522 citations]**
3. Albareti, F. *et al.* **2017** “The 13th Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-IV Survey Mapping Nearby Galaxies at Apache Point Observatory”. *The Astrophysical Journal Supplements*, Vol 233, 25. **[345 citations]**
4. Shivvers, I. *et al.* **2017** “The Nearby Type Ibn Supernova 2015G: Signatures of Asymmetry and Progenitor Constraints”. *Monthly Notices of the Royal Astronomical Society*, Vol 2471, 4381. **[10 citations]**
5. Alam, S. *et al.* **2017** “The Clustering of Galaxies in the Completed SDSS-III Baryon Oscillation Spectroscopic Survey: Cosmological Analysis of the DR12 Galaxy Sample”. *Monthly Notices of the Royal Astronomical Society*. Vol 470, 2617. **[851 citations]**
6. Blanton, M. *et al.* **2017** “Sloan Digital Sky Survey IV: Mapping the Milky Way, Nearby Galaxies, and the Distance Universe”. *The Astronomical Journal*. Vol 154, 28. **[419 citations]**
7. Shen, Y.; *et al.* **2016** “The Sloan Digital Sky Survey Reverberation Mapping Project: First Broad-line Hbeta and MgII Lags at $z \gtrsim 0.3$ from six-Month Spectroscopy” *The Astrophysical Journal*, Vol 818, 30. **[65 citations]**
8. Dawson, Kyle S. *et al.* **2016**. “The SDSS-IV Extended Baryon Oscillation Spectroscopic Survey: Overview and Early Data”. *The Astronomical Journal*. Vol 151, 44. **[317 citations]**
9. Holtzman, Jon A. *et al.* **2015**. “Abundances, Stellar Parameters and Spectra from the SDSS-III/APOGEE Survey”. *The Astronomical Journal*. Vol 150, 148. **[267 citations]**
10. Grier, C. J. *et al.* **2015** “The Sloan Digital Sky Survey Reverberation Mapping Project: Rapid CIV Broad Absorption Line Variability” *The Astrophysical Journal*. Vol 806, 111. **[50 citations]**

11. Gezari, S. *et al.* **2015** “GALEX Detection of Shock Breakout in Type IIP Supernova PS1-13arp: Implications for the Progenitor Star Wind”
The Astrophysical Journal, Vol 804, 28. **[30 citations]**
12. Newman, Jeffrey A. **2015** *et al.* “Spectroscopic needs for imaging dark energy experiments”
Astroparticle Physics, Vol 63, 81. **[62 citations]**
13. Kumar, S. *et al.* **2015** “Selection of Burst-like Transients and Stochastic Variables Using Multi-band Image Differencing in the PAN-STARRS1 Medium-deep Survey”
The Astrophysical Journal, Vol 802, 27. **[7 citations]**
14. Kim, A. G. *et al.* **2015** “Distance probes of dark energy”
Astroparticle Physics, Vol 63, 2 **[15 citations]**
15. Shen, Yue. *et al.* **2015** “The Sloan Digital Sky Survey Reverberation Mapping Project: Technical Overview”. *The Astrophysical Journal Supplements*, Vol 216, 4 **[99 citations]**
16. Astier, P. *et al.* **2014**. “Extending the supernova Hubble diagram to $z \sim 1.5$ with the Euclid space mission”. *Astronomy & Astrophysics*. Vol 572, 80. **[29 citations]**
17. Rest, A. *et al.* **2013**. “Cosmological Constraints from Measurements of Type Ia Supernovae discovered during the first 1.5 years of the Pan-STARRS1 Survey”.
The Astrophysical Journal. Vol 795, 44. **[217 citations]**
18. Scolnic, D. *et al.* **2013**. “Systematic Uncertainties Associated with the Cosmological Analysis of the First Pan-STARRS1 Type Ia Supernova Sample”.
The Astrophysical Journal. Vol 795, 45. **[123 citations]**
19. Bianco, F. B. *et al.* **2014**, “Multi-color Optical and Near-infrared Light Curves of 64 Stripped-envelope Core-Collapse Supernovae”. *Astrophysical Journal Supplement*, Vol 213, id. 19. **[84 citations]**
20. Luciani, T. *et al.* **2014**, “Large-Scale Overlays and Trends: Visually Mining, Panning and Zooming the Observable Universe”. *Transactions on Visualization and Computer Graphics. IEEE Transactions*. Vol 20, 1048. **[7 citations]**
21. McCrum, M. *et al.* **2014**, “The superluminous supernova PS1-11ap: bridging the gap between low and high redshift”. *Monthly Notices of the Royal Astronomical Society*, Vol 437, p. 656. **[63 citations]**
22. Pâris, I. *et al.* **2014**, “The Sloan Digital Sky Survey quasar catalog: tenth data release”.
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