



Curriculum Vita
August 2026

Instructor: Dr. Kurtis A. Williams, Professor and Department Head

Academic Department: Physics & Astronomy

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EDUCATION

Doctor of Philosophy in Astronomy & Astrophysics
2002, University of California, Santa Cruz

Master of Science in Astronomy & Astrophysics
1999, University of California, Santa Cruz

Bachelor of Science in Physics
Bachelor of Science in Astronomy & Astrophysics
1996, Pennsylvania State University

TEACHING EXPERIENCE

2024-present: Professor, East Texas A&M University, Commerce, TX
2023-present: Department Head, Dept. of Physics & Astronomy, East Texas A&M University, Commerce, TX
2016-2024: Associate Professor, Texas A&M University-Commerce, Commerce, TX
2010-2016: Assistant Professor, Texas A&M University-Commerce, Commerce, TX
2009-2010: Postdoctoral Researcher, University of Texas, Austin, TX
2006-2009: NSF Postdoctoral Fellow, University of Texas, Austin, TX
2003-2006: Research Associate, Steward Observatory, Tucson, AZ

PUBLICATIONS

Statistics from Google Scholar:

Total citations: 3224

h-index: 32

Refereed Publications

1. "84 and 169 s Rotation of Two Isolated, Ultramassive, Strongly Magnetic White Dwarfs," **Williams, K.A.**, Martinez, Z., and Ornelas, M., 2025, The Astrophysical Journal, 994, 12, <https://doi.org/10.3847/1538-4357/ae1613>
2. "The merger fraction of ultramassive white dwarfs," Kilic, M. et al. (**Williams, K.A.** as 8th author) 2023, Monthly Notices of the Royal Astronomical Society, 518, 2341, <https://doi.org/10.1093/mnras/stac3182>
3. "The Rapid Rotation of the Strongly Magnetic Ultramassive White Dwarf EGGR 156," **Williams, K.A.**, Hermes, J.J. and Vanderbosch, Z.P. 2022, The Astronomical Journal, 164, 131, <https://doi.org/10.3847/1538-3881/ac8543>
4. "The Initial-Final Mass Relation for Hydrogen-deficient White Dwarfs," Barnett, J.W., **Williams, K.A.** (as corresponding author), Bedard, A., & Bolte, M. 2021, The Astronomical Journal, 162, 162, <https://doi.org/10.3847/1538-3881/ac1423>
5. "The White Dwarfs of the Old, Solar-Metallicity Open Star Cluster Messier 67: Properties and Progenitors," Canton, P.A., **Williams, K.A.** (as corresponding author), Kilic, M. and Bolte, M. 2021, The Astronomical Journal, 161, 169, <https://doi.org/10.3847/1538-3881/abe1ad>
6. "The Pulsating White Dwarf G117-B15A: Still the Most Stable Optical Clock Known," Kepler, S.O., et al. (**Williams, K.A.** as 15th author) 2021, The Astrophysical Journal, 906, 7, <https://doi.org/10.3847/1538-4357/abc626>
7. "Ensemble Properties of the White Dwarf Population of the Old, Solar Metallicity Open Cluster Messier 67," **Williams, K. A.**, et al. 2018, The Astrophysical Journal, 867, 62, <https://doi.org/10.3847/1538-4357/aad90b>
8. "A Spectroscopic Survey of the Fields of 28 Strong Gravitational Lenses: Implications for H_0 ," Wilson, M. L. et al. (**Williams, K.A.** as 5th author) 2017, The Astrophysical Journal, 850, 94, <http://dx.doi.org/10.3847/1538-4357/aa9653>
9. "The Ages of the Thin Disk, Thick Disk, and the Halo from Nearby White Dwarfs," Kilic, M., et al. (**Williams, K. A.** as 6th author) 2017, The Astrophysical Journal, 837, 162, <http://doi.org/10.3847/1538-4357/aa62a5>
10. "A Deep Proper Motion Catalog Within the Sloan Digital Sky Survey Footprint. II. The White Dwarf Luminosity Function," Munn, J. A., et al. (**Williams, K. A.** as 6th author) 2017, The Astronomical Journal, 153, 10, <http://doi.org/10.3847/1538-3881/153/1/10>
11. "New halo white dwarf candidates in the Sloan Digital Sky Survey," Dame, K., et al. (**Williams, K. A.** as 6th author) 2016, Monthly Notices of the Royal Astronomical Society, 463, 2453, <http://doi.org/10.1093/mnras/stw2146>
12. "A Spectroscopic Survey of the Fields of 28 Strong Gravitational Lenses: the Group Catalog," Wilson, M. L., et al. (**Williams, K. A.** as 5th author) 2016, The Astrophysical Journal, 833, 194, <http://doi.org/10.3847/1538-4357/833/2/194>

13. "Variability in Hot Carbon-dominated Atmosphere (Hot DQ) White Dwarfs: Rapid Rotation?," **Williams, K. A.**, et al. 2016, The Astrophysical Journal, 817, 27, <http://doi.org/10.3847/0004-637X/817/1/27>
14. "Time-series Spectroscopy of Two Candidate Double Degenerates in the Open Cluster NGC 6633," **Williams, K. A.**, et al. 2015, The Astronomical Journal, 150, 194, <http://doi.org/10.1088/0004-6256/150/6/194>
15. "A Spectroscopic Survey of the Fields of 28 Strong Gravitational Lenses," Momcheva, I. G., et al. (**Williams, K. A.** as 2nd author) 2015, The Astrophysical Journal Supplement Series, 219, 29, <http://doi.org/10.1088/0067-0049/219/2/29>
16. "A Deep Proper Motion Catalog Within the Sloan Digital Sky Survey Footprint," Munn, J. A., et al. (**Williams, K. A.** as 6th author) 2014, The Astronomical Journal, 148, 132, <http://doi.org/10.1088/0004-6256/148/6/132>
17. "Photometric Variability in a Warm, Strongly Magnetic DQ White Dwarf, SDSS J103655.39+652252.2," **Williams, K. A.**, et al. 2013, The Astrophysical Journal, 769, 123, <http://doi.org/10.1088/0004-637X/769/2/123>
18. "The Age and Stellar Parameters of the Procyon Binary System," Liebert, J., et al. (**Williams, K. A.** as 4th author) 2013, The Astrophysical Journal, 769, 7, <http://doi.org/10.1088/0004-637X/769/1/7>
19. "Time-resolved Spectroscopy of the Polar EU Cancr in the Open Cluster Messier 67," **Williams, K. A.**, et al. 2013, The Astronomical Journal, 145, 129, <http://doi.org/10.1088/0004-6256/145/5/129>
20. "A Gravitational Redshift Determination of the Mean Mass of White Dwarfs: DBA and DB Stars," Falcon, R. E., et al. (**Williams, K. A.** as 4th author) 2012, The Astrophysical Journal, 757, 116, <http://doi.org/10.1088/0004-637X/757/2/116>
21. "Further Investigation of White Dwarfs in the Open Clusters NGC 2287 and NGC 3532," Dobbie, P. D., et al. (**Williams, K. A.** as 3rd author) 2-12, Monthly Notices of the Royal Astronomical Society, 432, 2815, <http://dx.doi.org/10.1111/j.1365-2966.2012.21090.x>
22. "Discovery of a ZZ Ceti in the Kepler Mission Field," Hermes, J. J., et al. (**Williams, K. A.** as 4th author) 2011, The Astrophysical Journal, 741, L16, <http://doi.org/10.1088/2041-8205/741/1/L16>
23. "The Effect of Environment on Shear in Strong Gravitational Lenses," Wong, K. C., et al. (**Williams, K. A.** as 3rd author) 2011, The Astrophysical Journal, 726, 84, <http://doi.org/10.1088/0004-637X/726/2/84>
24. "A Detailed Model Atmosphere Analysis of Cool White Dwarfs in the Sloan Digital Sky Survey," Kilic, M., et al. (**Williams, K. A.** as 8th author) 2010, The Astrophysical Journal Supplement Series, 190, 77, <http://doi.org/10.1088/0067-0049/190/1/77>
25. "Discovery of a Nova-like Cataclysmic Variable in the Kepler Mission Field," **Williams, K. A.**, et al. 2010, The Astronomical Journal, 139, 2587, <http://doi.org/10.1088/0004-6256/139/6/2587>
26. "Discovery of a GeV Blazar Shining Through the Galactic Plane," Vandenbroucke, J. et al. (**Williams, K. A.** as 22nd author) 2010, The Astrophysical Journal Letters, 718, 166, <http://dx.doi.org/10.1088/2041-8205/718/2/L166>

27. "Visitors from the Halo: 11 Gyr Old White Dwarfs in the Solar Neighborhood," Kilic, M., et al. (**Williams, K. A.** as 3rd author) 2010, The Astrophysical Journal, 715, L21, <http://doi.org/10.1088/2041-8205/715/1/L21>
28. "A Gravitational Redshift Determination of the Mean Mass of White Dwarfs. DA Stars," Falcon, R. E., et al. (**Williams, K. A.** as 4th author) 2010, The Astrophysical Journal, 712, 585, <http://doi.org/10.1088/0004-637X/712/1/585>
29. "A New Detailed Examination of White Dwarfs in NGC 3532 and NGC 2287," Dobbie, P. D., et al. (**Williams, K. A.** as 4th author) 2009, Monthly Notices of the Royl Astronomical Society, 395, 2248, <http://dx.doi.org/10.1111/j.1365-2966.2009.14688.x>
30. "Probing the Lower Mass Limit for Supernova Progenitors and the High-Mass End of the Initial-Final Mass Relation from White Dwarfs in the Open Cluster M35 (NGC 2168)," **Williams, K. A.**, Bolte, M., Koester, D. 2009, The Astrophysical Journal, 693, 355, <http://doi.org/10.1088/0004-637X/693/1/355>
31. "The Physics of Crystallization from Globular Cluster White Dwarf Stars in NGC 6397," Winget, D. E. et al. (**Williams, K. A.** as 7th author) 2009, The Astrophysical Journal Letters, 693, 6, <http://dx.doi.org/10.1088/0004-637X/693/1/L6>
32. "SDSS J142625.71+575218.3: The First Pulsating White Dwarf with a Large Detectable Magnetic Field," Dufour, P. et al. (**Williams, K. A.** as 4th author) 2008, The Astrophysical Journal, 683, 167, <http://dx.doi.org/10.1086/591672>
33. "The White Dwarf Population in NGC 1039 (M34) and the White Dwarf Initial-Final Mass Relation," Rubin, K. H. R., et al. (**Williams, K. A.** as 2nd author) 2008, The Astronomical Journal, 135, 2163, <http://doi.org/10.1088/0004-6256/135/6/2163>
34. "SDSS J142625.71+575218.3: A Prototype for a New Class of Variable White Dwarf," Montgomery, M. H., et al. (**Williams, K. A.** as 2nd author) 2008, The Astrophysical Journal, 678, L51, <http://doi.org/10.1086/588286>
35. "Erratum: "First Results from a Photometric Survey of Strong Gravitational Lens Environments" (ApJ, 646, 85 [2006])," **Williams, K. A.**, et al. 2008, The Astrophysical Journal, 672, 733, <http://doi.org/10.1086/523939>
36. "A Photometric and Spectroscopic Search for White Dwarfs in the Open Clusters NGC 6633 and NGC 7063," **Williams, K. A.**, Bolte, M. 2007, The Astronomical Journal, 133, 1490, <http://doi.org/10.1086/511675>
37. "Ophiuchus 1622-2405: Not a Planetary Mass Binary," Luhman, K. L., et al. (**Williams, K. A.** as 5th author) 2007, The Astrophysical Journal, 659, 1629, <http://dx.doi.org/10.1086/512539>
38. "The Precataclysmic Binary HS 1136+6646 May Have a Companion," Liebert, J., et al. (**Williams, K. A.** as 2nd author) 2006, Publications of the Astronomical Society of the Pacific, 118, 1528, <http://doi.org/10.1086/509664>
39. "First Results from a Photometric Survey of Strong Gravitational Lens Environments," **Williams, K. A.**, et al. 2006, The Astrophysical Journal, 646, 85, <http://doi.org/10.1086/504788>
40. "A Hot DQ White Dwarf in the Open Star Cluster M35," **Williams, K. A.**, et al. 2006, The Astrophysical Journal, 643, L127, <http://doi.org/10.1086/505211>

41. "A Spectroscopic Study of the Environments of Gravitational Lens Galaxies," Momcheva, I. G., **Williams, K. A.**, Keeton, C. R., Zabludoff, A. I. 2006, The Astrophysical Journal, 641, 169, <http://dx.doi.org/10.1086/500382>
42. "Cool White Dwarfs in the Sloan Digital Sky Survey," Kilic, M., et al. (**Williams, K. A.** as 6th author) 2006, The Astronomical Journal, 131, 582, <http://doi.org/10.1086/497962>
43. "The White Dwarf Luminosity Function from Sloan Digital Sky Survey Imaging Data," Harris, H. C., et al. (**Williams, K. A.** as 5th author) 2006, The Astronomical Journal, 131, 571, <http://doi.org/10.1086/497966>
44. "The Age and Progenitor Mass of Sirius B," Liebert, J., et al. (**Williams, K. A.** as 5th author) 2005, The Astrophysical Journal, 630, L69, <http://doi.org/10.1086/462419>
45. "The open-cluster initial-final mass relationship and the high-mass tail of the white dwarf distribution," Ferrario, L., et al. (**Williams, K. A.** as 4th author) 2005, Monthly Notices of the Royal Astronomical Society, 361, 1131, <http://doi.org/10.1111/j.1365-2966.2005.09244.x>
46. "An Empirical Initial-Final Mass Relation from Hot, Massive White Dwarfs in NGC 2168 (M35)," **Williams, K. A.**, Bolte, M., Koester, D. 2004, The Astrophysical Journal, 615, L49, <http://doi.org/10.1086/425995>
47. "Spectroscopic Identification of Faint White Dwarf Candidates in the Praesepe Open Star Cluster," **Williams, K. A.**, Bolte, M., Liebert, J. W. 2004, The Astronomical Journal, 128, 1784, <http://doi.org/10.1086/423907>
48. "The Impact of Unresolved Binaries on Searches for White Dwarfs in Open Clusters," **Williams, K. A.** 2004, The Astrophysical Journal, 601, 1067, <http://doi.org/10.1086/380754>
49. "The White Dwarf Deficit in Open Clusters: Dynamical Processes," Fellhauer, M., et al. (**Williams, K. A.** as 5th author) 2003, The Astrophysical Journal, 595, 53, <http://dx.doi.org/10.1086/379005>
50. "Determination of the Dark Matter Profile of A2199 from Integrated Starlight," Kelson, D. D., et al. (**Williams, K. A.** as 3rd author) 2002, The Astrophysical Journal, 576, 720, <http://dx.doi.org/10.1086/341891>
51. "Serendipitous Discovery of a Cluster of Galaxies with a Peculiar Central Galaxy," **Williams, K. A.** 2001, The Astronomical Journal, 122, 55, <http://doi.org/10.1086/321134>
52. "The Velocity Function of Galaxies," Gonzalez, A. H., et al. (**Williams, K. A.** as 2nd author) 2000, The Astrophysical Journal, 528, 145, <http://doi.org/10.1086/308159>
53. "The Large-Scale Diffuse X-ray Emission Surrounding Quasars: An Investigation Using the Scaling Index Method," **Williams, K. A.**, Brinkmann, W., Wiedenmann, G. 1998, Astronomy & Astrophysics, 340, 343, <http://adsabs.harvard.edu/abs/1998A%26A...340..343W>

Selected Non-Refereed Publications

1. "Photometric Monitoring of the ZZ Ceti Star PG 1541+651," Clausen, M.E. & **Williams, K.A.** 2023, Research Notes of the American Astronomical Society, 7, 122, <https://doi.org/10.3847/2515-5172/acdc93>

2. "Ensemble evolutionary studies of white dwarfs in open star clusters," **Williams, K.A.** 2020, in "IAU Symposium 357, White Dwarfs as Probes of Fundamental Physics," ed. M.A. Barstow et al. (Cambridge: Cambridge University Press), 179, <https://doi.org/10.1017/S1743921320000848>
3. "Defining the DS Spectral Type for Oxygen-atmosphere White Dwarfs," **Williams, K.A.**, Kepler, S.O., and Sion, E.M. 2019, Research Notes of the American Astronomical Society, 3, 109, <https://iopscience.iop.org/article/10.3847/2515-5172/ab3469>
4. "Lessons Learned from the 'Age of the Milky Way' Teacher Professional Development Workshop Evaluation," Hemenway, M. K., et al. (**Williams, K. A.** as 6th author) 2010, Science Education and Outreach: Forging a Path to the Future. Edited by Jonathan Barnes, Denise A. Smith, Michael G. Gibbs, and James G. Manning., p.160, <http://adsabs.harvard.edu/abs/2010ASPC..431..160H>
5. "White Dwarfs in the HET Dark Energy Experiment," Castanheira, B. G. et al., (**Williams, K. A.** as 3rd author) 2010, AIP Conf. Proc.: 17th European White Dwarf Workshop, 1273, 160 <http://dx.doi.org/10.1063/1.3527795>
6. "Reports on New Discoveries," Degennaro, S., **Williams, K.**, Montgomery, M. 2008, International Bulletin on Variable Stars, 5800, 8
7. "A New Look at the Empirical Initial-Final Mass Relation," **Williams, K. A.** 2007, 15th European Workshop on White Dwarfs ASP Conference Series, Vol. 372, Edited by Ralf Napiwotzki and Matthew R. Burleigh. San Francisco: Astronomical Society of the Pacific, p. 85 <http://adsabs.harvard.edu/abs/2007ASPC..372...85W>
8. "A Spectroscopic Study of the Environments of Gravitational Lens Galaxies," Momcheva, I., **Williams, K.**, Keeton, C., & Zabludoff, A. 2006, EAS Publications Series: Mass Profiles and Shapes of Cosmological Structures, 20, 289, <http://dx.doi.org/10.1051/eas:2006094>
9. "Minor Planet Observations [696 Whipple Observatory, Mt. Hopkins]," Hergenrother, C. W., Spahr, T. B., **Williams, K. A.**, Berlind, P., & Calkins, M. 2005, MPC, 54975, 8
10. "White dwarfs in open clusters: The initial-final mass limit, the supernova mass limit, and the white dwarf deficit," **Williams, K. A.** 2002, Ph.D. Thesis, <http://adsabs.harvard.edu/abs/2002PhDT.....17W>

RESEARCH GRANTS AND AWARDS

Research Grants

- 2024, co-PI (Dr. Heungman Park PI), NSF REU Grant PHY-2349111, "REU Site: Summer Research Program for Community College and Liberal Arts College Students in Physics and Astronomy," \$111,174
- 2019-2024, PI, NSF Astronomy and Astrophysics Research Grant AST-1910551, "RUI: Ensemble Evolutionary Studies of White Dwarfs", \$273,000
- 2017-2018, Co-PI (Dr. Matt Wood PI), NSF MRI Grant AST-1726357, "Acquisition of a 0.7-m Research Grade Telescope for Texas A&M University-Commerce", \$338,000

2014-2017, PI, Research Corporation Cottrell College Science Award, "Direct Determination of the Masses of DQ White Dwarfs via Parallax", \$45,000
2012-2014, PI, Texas Space Grant Consortium, "Development of an On-line Introductory Astronomy Course," \$13,000.
2011-2013, PI, GALEX Cycle 6 GI Program, "Time Series Observations of the Mysterious Carbon Atmosphere White Dwarfs," \$65,000.
2008-2010, PI, HST Cycle 16 E/PO HST16-456, "White Dwarfs in the Open Star Cluster NGC 188: A Professional Development Experience for Teachers," \$20,000
2007-2010, PI, HST Cycle 16 Program GO-11141, "White Dwarfs in the Open Star Cluster NGC 188", \$133,000
2006-2009, PI, NSF Postdoctoral Fellowship AST-0602288, \$201,000

Academic Awards

2016, Texas A&M University-Commerce Excellence in Faculty Research, Annual Research Symposium
2016, Texas A&M University-Commerce Faculty Senate Award for Professional Excellence, "Ceaseless Industry"
2006-2009, NSF Astronomy & Astrophysics Postdoctoral Fellowship, University of Texas at Austin
2001, ARCS Foundation Graduate Fellowship, University of California Santa Cruz
1997-2000, NSF Graduate Research Fellowship, University of California Santa Cruz
1996, Fulbright Fellowship, Ludwig-Maximilians-Universität, Munich, Germany