

Kristen Dage

Curriculum Vitæ

Graduate Student
Dept. of Physics and Astronomy
Michigan State University
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Education

- 2015 - present Ph.D. Astronomy and Astrophysics
Michigan State University, East Lansing, MI
Advisor: S.E. Zepf
- 2015 - 2017 M.S. Astronomy and Astrophysics
Michigan State University, East Lansing, MI
- 2012 - 2014 B.S. Physics
University of Michigan-Dearborn, Dearborn MI

Teaching and Mentoring Experience

- 2018- Supervising MSU undergraduate Omid Noroozi's project of searching for long and short term variability of ultraluminous X-ray sources in globular clusters.
- 2015 - 2018 Teaching Assistant
ISP 205L -Visions of the Universe
Michigan State University, East Lansing, MI
- 2011 - 2014 Math, Physical Sciences Tutor
Academic Support Center
Oakland Community College, Farmington Hills, MI

Accepted Proposals

Chandra Cycle 20: *"The Nature of the Two Globular Cluster ULXs in the Galaxy NGC 4472"*. Awarded 90 ks time.

Professional Presentations

- 2018 Aug International Centre for Radio Astronomy Research (Perth, Australia), Colloquium Talk
- 2018 Aug Chandra Accretion Workshop (Cambridge, MA), Poster presentation
- 2018 Apr Compact Objects in Michigan 6 (Ann Arbor, MI), Contrib. Talk
- 2018 Mar HEAD Special Meeting on High Energy Astrophysics in the 2020s and Beyond (Rosemont, IL), [Poster presentation](#)
- 2017 Mar Compact Objects in Michigan 5 (East Lansing, MI), Contrib. Talk
- 2017 Feb Gemini South Observatory, (La Serena, Chile), Colloquium Talk
- 2017 Jan 229th American Astronomical Society meeting (Grapevine, TX), Poster presentation
- 2014 Nov Annual Physics Undergrad Research Conference at Wayne State University (Detroit, MI), Poster presentation
- 2014 Jun 218th American Astronomical Society meeting (Boston, MA), [Poster presentation](#)
- 2014 Apr Compact Objects in Michigan 2 (East Lansing, MI), Contrib. Talk

Outreach

- 2018 Volunteer at MSU Observatory's Nature Night, East Lansing, MI
- 2018 Public talk on "History of Astronomy" for Astronomy on Tap, Lansing MI ([slides](#))
- 2018 MSU Science Festival Expo Days (Primary Astronomy Organizer), East Lansing, MI
- 2017 Public talk for Capital Area Astronomy Association, East Lansing, MI
- 2017 Public talk on "Observing in Chile" for Astronomy on Tap, Lansing MI
- 2016 Volunteer at MSU Science Festival Expo Days, East Lansing, MI

Other

- 2018 Certificate in Inclusive Inquiry STEM Education from the [Institute for Scientist & Engineer Educators Professional Development Program \(ISEE PDP\)](#), Santa Cruz, CA.
- 2018 Astronomy Instructor - GUPPY (Gifted University for Parents and Precocious Youth) Designed curriculum and instructed a class for 5th-6th graders through MSU's Gifted and Talented Education program. (June 30-July 1), East Lansing, MI.
- 2017-2018 Mentor for REU students and incoming graduate students through MSU's WAMPS (Women and Minorities in Physical Sciences), East Lansing, MI.
- 2016- Organizer of MSU Astronomy group journal discussion, East Lansing, MI.
- 2014 Outstanding Physics Student *Dept. Natural Sciences, University of Michigan-Dearborn*
- 2014 English Translation (from German) of Boltzmann's "[Analytical Proof of the Second Law of Thermodynamics from the Basis of the Conservation of Total Energy](#)", under the supervision of Dr. Jeffrey Prentis (Natural Sciences Dept.) and Dr. Jacqueline Vansant (German Dept.), University of Michigan-Dearborn, Dearborn, MI.
- 2012-2014 Undergraduate Research with Dr. Will Clarkson, which ultimately resulted in our 2018 publication "[A Search for Spin-Superorbital Period Correlation in SMC X-1](#)", University of Michigan-Dearborn, Dearborn, MI.

Experience and Analysis Skills

- X-ray spectroscopy, imaging analysis (*Chandra*, *XMM-Newton*, *RXTE*)
- Optical spectroscopy analysis (*SOAR/GHTS*, *Gemini/GMOS*, *VLT/FORS2*)
- Ultraviolet imaging and photometry analysis (*Swift/UVOT*)
- Conducting optical observations (*SOAR* observatory)
- Programming: Python, Mathematica
- Major astronomical packages: AstroPy, CIAO, HEASoft (XSpec, FTools), IRAF

Publications

Refereed

1. **K. C. Dage**, S. E. Zepf, A. Bahramian, A. Kundu, T. J. Maccarone, M. B. Peacock, "X-Ray Variability from the Ultraluminous Black Hole Candidate X-ray Binary in the Globular Cluster RZ 2109", 2018, [ApJ](#), [Accepted](#).
2. **K.C. Dage**, W.I. Clarkson, P.A. Charles, S. Laycock, I-C. Shih "A Search for Spin-Superorbital Period Correlation in SMC X-1", 2018, [MNRAS](#), [accepted](#).
3. M. A. Tucker, B. J. Shappee, T. W.-S. Holoien, K. Auchettl, J. Strader, K. Z. Stanek, C. S. Kochanek, A. Bahramian, Subo Dong, J. L. Prieto, Todd A. Thompson, John F. Beacom, L. Chomiuk, L. Denneau, H. Flewelling, A. N. Heinze, K. W. Smith, B. Stalder, J. L. Tonry, H. Weiland, A. Rest, M. E. Huber, D. M. Rowan, **K. Dage** "ASASSN-18ey: The Rise of a New Black-Hole X-ray Binary" 2018, [ApJ](#), [Accepted](#).
4. **K.C. Dage**, S.E. Zepf, M.B. Peacock, A. Bahramian, O. Noroozi, A.Kundu, T.J. Maccarone, "X-Ray Spectral Variability of Ultraluminous X-Ray Sources in Extragalactic Globular Clusters", 2018 MNRAS, submitted.
5. **K.C. Dage**, S.E. Zepf, M.B. Peacock, A. Bahramian, A. Kundu, T.J. Maccarone, "Optical Monitoring of the Broad [OIII] Emission Line in Globular Cluster Black Hole Candidate RZ2109", 2018 (in prep)

Unrefereed

1. **Dage, K. C.**; Zepf, S. E.; Strader, J.; Dimitriadis, G.; Foley, R. J.; Kilpatrick, C. D.; Jones, D. O.; Rojas-Bravo, C. "Spectroscopic Classification of SN 2018agk with SOAR/Goodman", 2018, The Astronomer's Telegram, No. 11433
2. Bahramian, A.; Strader, J.; **Dage, K.**, "SOAR/Goodman optical spectroscopy of MAXI J1820+070", 2018, The Astronomer's Telegram, No. 11424