Michelle L. Edwards

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EDUCATION

2008 Ph.D. Astronomy, University of Florida, Gainesville, FL (anticipated)
2003 M.S. Astronomy, University of Florida, Gainesville, FL
2001 B.S. Physics and Astronomy, Dickinson College, Carlisle, PA
Departmental Honors, Summa Cum Laude

RESEARCH EXPERIENCE

A Narrow-band Survey to Search for Massive Stars Around Magnetars
Advisors: Drs. Stephen Eikenberry & Reba Bandyopadhyay
(2004 – present)
Proposed for and acquired data with ISPI on the CTIO 4 m, Flamingos on the KPNO 4 m, and WIRC on the Palomar 200" to search for massive stars associated with Soft Gamma Ray Repeaters (SGRs) and Anomalous X-Ray Pulsars (AXPs). Currently analyzing data to search for potential undiscovered massive clusters.

Probing the Extent and Membership of Cl 1806-20
Advisors: Drs. Stephen Eikenberry & Reba Bandyopadhyay
(2006 – present)
Proposed for and acquired multi-object and integral field spectroscopy of Cl 1806-20 using Flamingos and the IFU FISICA on the Kitt Peak 4-m to identify and classify cluster members

Luminous Blue Variables in Cluster Environments
Advisors: Drs. Stephen Eikenberry & Reba Bandyopadhyay
(2006 – present)
Analyzed literature data to characterize the locations of Luminous Blue Variables in cluster environments.

Ages of Globular Clusters in the Local Group
Advisor: Dr. Ata Sarajedini
(2002 – 2003)
Researched globular clusters in four local group galaxies to determine formation histories and ages.

REU Project: High Proper Motion Objects in the Southern Sky
Advisors: Drs. Stephen Levine and David Monet
(1999)

INSTRUMENTATION

The Canarias InfraRed Camera Experiment (CIRCE)
Advisor: Dr. Stephen Eikenberry
(2003 – present)
Extensive involvement with the Canarias Infrared Camera Experiment (CIRCE), a near-infrared camera for the 10.4 meter Gran Telescopio Canarias: analyzed and toleranced complex, aspherical reflective optical design, completed opto-mechanical design of the brackets and mirrors, designed cryo-mechanical filter box and related mechanisms.

Quantum Well Electron Gain Structure (QWEGS)
Advisor: Dr. Stephen Eikenberry
(2003)
Completed wire diagrams, wiring, cold testing, and mechanical design work for a cryogenic test dewar.

GSFC Student Internship Program
Advisor: Dr. Edward Cheng
(2001)
Worked to develop an alternate method to test the quantum efficiency of optical detectors for the Detector Characterization Lab during a summer internship through the Student Internship Program (SIP) at Goddard Space Flight Center in Greenbelt, MD.

CCD Installation for the Dickinson College 24" Britton Telescope
Advisors: Drs. Windsor Morgan and Robert Boyle
(2000 – 2001)

TEACHING EXPERIENCE

I have over six years of teaching experience, having served as a teaching assistant for 3 years at Dickinson College in Carlisle, PA and 3.5 year at the University of Florida in Gainesville, FL. My teaching responsibilities included: grading labs, homework, term papers, and research projects, lecturing, assisting and leading undergraduate physics and astronomy labs, writing manuals for and training students on 18" and 24" telescopes, and supervising undergraduate research projects. I have worked with a variety of students including undergraduate physics and astronomy majors, non-science majors, and junior graduate students.

T.A. for Prof. Jian Ge: **Graduate Observational Techniques**
University of Florida; 2007 – present

T.A. for Prof. John Oliver: **Undergraduate Observational Techniques**
University of Florida; 2001 – 2004

Introductory Astronomy Lab Instructor
University of Florida; 2002 –2002

T.A. for Prof. Windsor Morgan: **Intermediate Astrophysics**
Dickinson College; 2001

Student Director of 24" Britton Telescope
Dickinson College; 2000 – 2001

T.A. for Profs. Windsor Morgan and Robert Boyle: **Astronomy Lab**
Dickinson College; 1998 – 2001

T.A. for Prof. Priscilla Laws: **Introductory Workshop Physics Lab**
Dickinson College; 1998 –1999

OBSERVING EXPERIENCE

- CTIO 4-m with the Infrared Side Port Imager (ISPI)
- KPNO 4-m with FLAMINGOS-1 and FISICA (IFU)
- Palomar 200" with the Wide Field InfraRed Camera (WIRC)
- KPNO 0.9-m with Mosaic
- KPNO McMath-Pierce with visiting mid-IR spectrograph Celeste
- Lowell Observatory 31" Telescope
- Dickinson College 24" Britton Telescope

AWARDS & HONORS

2006 P.E.O. Scholar Award
2001 Three-Year Grinter Fellowship, University of Florida
2001 Physics and Astronomy Teaching Excellence Award, Dickinson College
2000 Phi Beta Kappa Honor Society, Dickinson College
2000 Omicron Delta Kappa Leadership Honor Society, Dickinson College
1999 Sigma Pi Sigma Physics Honor Society, Dickinson College
1997 Alpha Lambda Delta Freshman Honor Society, Dickinson College
1997 Four-Year Benjamin Rush Academic Scholarship from Dickinson College
1997 National Honor Society, Northern Burlington Country Regional High School

RECENT ASTRONOMY PUBLIC OUTREACH (2001-2006)

- Co-organized two public outreach events in collaboration with the Florida Natural Museum of History in Gainesville, Florida. The events required the coordination of 30 volunteers and drew 300 and 800 people respectively.

- Co-organized "Stars Shine on East Gainesville", an effort at Williams Elementary in Gainesville, Florida to reach underprivileged families with music and science. Over 40 volunteers and 900 guests attended.

- Participated in a two-day teacher-training workshop in August 2005 for local elementary and middle school science teachers.

- Visited local elementary school classrooms for yearly "Space Day" and "Astronomy Day". In 2005, I co-organized the event.

- Yearly lectures to Girl-Scout troops and science camps to encourage young women's participation in science during both undergraduate and graduate school.

- Facilitated "Public Night" at the Campus Teaching Observatory during entire graduate career. Supervised similar events throughout my undergraduate career.

SKILLS OF NOTE:

- Extensive experience with AutoCAD, ZEMAX, and Code V
- Completed Code V training course sponsored by Optical Research Associates
- Fluent in IDL computer language
- Experience with IRAF, Daophot, and Sextractor
- Expert in Linux, Windows, and Macintosh operating systems

REFERENCES:

Professor Stephen Eikenberry
211 Bryant Space Science Center
Gainesville, FL 32611 USA
Telephone: 352-392-2052 x260
E-mail: eiken@astro.ufl.edu

Dr. S. Nicholas Raines
211 Bryant Space Science Center
Gainesville, FL 32611 USA
Telephone: 352-392-2052 x244
E-mail: raines@astro.ufl.edu

Dr. Reba Bandyopadhyay
211 Bryant Space Science Center
Gainesville, FL 32611 USA
Telephone: 352-392-2052 x232
E-mail: reba@astro.ufl.edu

Professor Windsor Morgan
Department of Physics and Astronomy
Dickinson College
Carlisle, PA 17013 USA
Telephone: 717-245-1386
E-mail: morgan@dickinson.edu

REFEREED PUBLICATIONS

Edwards M. L., Eikenberry S. S., & Bandyopadhyay R. M. "Locations of Luminous Blue Variables in their Host Clusters", 2007, ApJ, in preparation.

Edwards, M. L., Eikenberry, S. S., & Bandyopadhyay R. M. "A Narrow-Band Survey to Search for Massive Stars Associated with SGR1806-20", in preparation.

TALKS, POSTERS, AND PROCEEDINGS:

Edwards. M. L., Eikenberry, S. S., Marin-Franch, A., Charcos-Llorens, M., Lasso, N., Rodgers, M., Julian, J. & Raines, S. N., Packham, C. Hanna, K, & Bandyopadhyay, R. "The Canarias InfraRed Camera Experiment (CIRCE) and the Study of XRBs". Poster to be presented at "A Population Explosion: The Nature and Evolution of X-ray Binaries in Diverse Environments." October, 2007

Edwards. M. L., Eikenberry, S. S., Marin-Franch, A., Charcos-Llorens, M., Rodgers, M., Julian, J. & Raines, S. N., & Packham, C. "Status of the Canarias InfraRed Camera Experiment". Talk presented at First Light With The Gran Canarias Telescopio, June, 2006. in Proc. of "First Light Science with the GTC," eds. Guzman, R., Packham, C., Rodriguez-Espinosa, J. M. & Torres-Peimbert, S. T., eds. RMxAC, Vol. 29, pp 21.

Edwards, M. L., Eikenberry, S. S., Marin-Franch, A., Charcos-Llorens, M., Rodgers, M., Julian, J., Raines, N., & Packham, C. "The Canarias InfraRed Camera Experiment (CIRCE): Optical and Opto-Mechanical Design and Manufacture," 2006, Ground-based Instrumentation for Astronomy. McLean, I. S. & Iye, M., eds. Proceedings of the SPIE, Vol. 6269, pp. 62694Z

Marin-Franch. A., Eikenberry, S. S., Charcos-Llorens, M. V., **Edwards. M. L.,** Varosi, F., Hon, D. B., Raines, S. N., Warner, C. D. & Rashkin, D. "Control software and user interface for the Canarias Infrared Camera Experiment (CIRCE)," 2006, Ground-based Instrumentation for Astronomy. McLean, I. S. & Iye, M., eds. Proceedings of the SPIE, Vol. 6269, pp. 62694V

Edwards, M. L., Marin-Franch, A., Eikenberry, S. S., Rodgers, M., Julian, J., Hanna, K., & Packham, C. "Overview of the Canarias InfraRed Camera Experiment," 2004, Ground-based Instrumentation for Astronomy. Moorwood, A. F. M. & Iye, M., eds. Proceedings of the SPIE, Vol 5492, pp. 1710.

Edwards. M. L., Eikenberry, S. S., Marin-Franch, A., Rodgers, M., Julian, J. & Hanna, K. "II International GTC Workshop: Science with GTC 1st- light instrument and the LMT". 2004. in Proc. of "First Light Science with the GTC," eds. Hidalgo-Gamez, A. M., Gonzalez, J. J., Rodriguez-Espinosa, J. M. & Torres-Peimbert, S. T., eds. RMxAC, Vol. 24, pp 235.

Boyle, R. J., Lauber, M., McFarland, K. L., **Edwards, M. L.**, Laws, P. W., Morgan, W. A., Smith, T. S., & Zamkoff, E. B. "New Astronomy Facility for Dickinson College". Poster presented at the joint meeting of the American Astronomical Society and American Association of Physics Teachers. January, 2001.