

CV — Michele A. Stark

Contact Information

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Current Employment

Associate Director, Wyoming NASA Space Grant Consortium July 2005
University of Wyoming, Laramie, Wyoming

Education

Michigan State University East Lansing, Michigan 1995–1999
B.S. in Astrophysics, *summa cum laude* with distinction in the major

The Pennsylvania State University State College, Pennsylvania 1999–2005
Ph.D. in Astronomy & Astrophysics, August 2005
Area of Specialization: Stellar Astronomy, Hot Subdwarf Stars

Awards and Honors

NASA Graduate Student Research Program Fellowship 2002–2005
Pennsylvania Space Grant Consortium Fellowship 2001–2003
Zaccheus Daniel Foundation for Astronomical Science Grant 2001, 2002, 2004
Sigma Xi Grants-in-Aid of Research 2001
Braddock Fellowship, The Pennsylvania State University 1999–2001
Michelson Interferometry Summer School 2000
Teaching Assistant of the Year 2000

Research Experience

Doctoral Research The Pennsylvania State University 2000–2005
Thesis Advisor: Dr. Richard A. Wade
Title: *The Origins of Hot Subdwarf Stars as Illuminated by Composite-Spectrum Binaries*
Examining multiple aspects of hot subdwarf stars, particularly focusing on hot subdwarfs in composite spectrum systems using near-IR photometry and medium resolution spectroscopy.

Graduate Research The Pennsylvania State University 2004
Research Advisor: Prof. Eric Feigelson
Analyzing high-resolution echelle spectroscopy of T Tauri stars from the Hobby-Eberly Telescope (HET), High Resolution Spectrograph (HRS).

Graduate Research The Pennsylvania State University 2000
Research Advisor: Prof. Michael Eracleous
Assisted with characterizing the Hobby-Eberly Telescope (HET) Marcario Low-Resolution Spectrograph (LRS).

Undergraduate Research Michigan State University 1997–1999
Research Advisor: Prof. Horace A. Smith
XX Leo eclipsing variable star observing project, junior independent research project. Photometry of variable Stars in the Small Magallanic Cloud beginning as a Research Experience for Undergraduates (REU) project, then continuing as a senior thesis project.

Undergraduates Research National Optical Astronomy Observatories 1998
Research Advisor: Dr. Buell T. Jannuzi
Analyzed WIYN-Hydra observations of galaxy redshifts for quasar absorption line association. Photometry of the variable star XX Cyg.

Teaching Experience

- Planetarium Assistant*** Michigan State University, Abrams Planetarium 1996–1999
Assisted with show development and presentation. Gave live current sky lectures. Assisted with an undergraduate Astronomy course on Celestial Navigation held in the planetarium.
- Teaching Assistant*** Michigan State University, Physics & Astronomy Dept. 1998–1999
Taught introductory physics laboratories for non-science majors, and acted as a resource room TA for an introductory astronomy lecture for non-science majors.
- Teaching Assistant*** The Pennsylvania State University, Astronomy Dept. 1999–2002
Taught introductory astronomy laboratories for non-science majors, and assisted with a course and associated lab for astronomy majors.
- Head Teaching Assistant*** The Pennsylvania State University, Astronomy Dept. 2001–2002
Supervised and coordinated the teaching assistants for introductory astronomy laboratories for non-science majors.
- ASTRO 11 Lab Manual Editor*** The Pennsylvania State University, Astronomy Dept. 2002
Editor for the 2002–2003 version of the ASTRO 11 lab manual. Also involved in developing and writing new labs.

Synergistic Activities

- Astronomy Outreach*** The Pennsylvania State University 1999–2005
Actively participated in astronomy outreach activities carried out at Penn State, including presenting planetarium shows, telescope open-houses, community observing events, and hands-on demonstrations for school and other groups.
- Astronomy Club Graduate Advisor*** The Pennsylvania State University 1999–2005
Advised the undergraduate student-run campus astronomy club.
- Telescope Committee*** The Pennsylvania State University 1999–2005
Oversaw the maintenance and use of the Astronomy Dept. telescopes for outreach and teaching.
- HET Local Users Group*** The Pennsylvania State University 2001–2005
Helped characterize the Hobby-Eberly Telescope (HET) instruments and disseminate knowledge about instrument function, data management, and processing techniques (particularly related to the Medium-Resolution Spectrograph, MRS).
- Hands-on Observing Experience*** 2002–2003
Provided hands-on observing experience to fellow graduate students by inviting them to participate in my observing runs at Kitt Peak and McDonald Observatories.
- Astronomy Graduate Program Committee*** The Pennsylvania State University 2003–2004
Representative for the graduate students on the department's Graduate Program Committee.
- Astronomy Outreach Committee*** The Pennsylvania State University 2004–2005
Graduate representative on the faculty committee responsible for overseeing the Dept. of Astronomy & Astrophysics outreach efforts.

Refereed Publications

1. Stark, M. A., *The Origins of Hot Subdwarf Stars as Illuminated by Composite Spectrum Binaries*, 2005, Ph.D. Thesis, The Pennsylvania State University
2. Hillwig, T. C., Gies, D. R., Huang, W., McSwain, M. V., Stark, M. A., van der Meer, A., & Kaper L., *Identification of the Mass Donor Star's Spectrum in SS 433*, 2004, ApJ, **615**, 422
3. Stark, M. A., Wade, R. A., & Berriman, G. B., *Single and Composite Hot Subdwarf Stars in the Light of 2MASS All-Sky Photometry*, 2004, Ap&SS, **291**, 333
4. Wade, R. A. & Stark, M. A., *Are All Hot Subdwarf Stars in Close Binaries?*, 2004, Ap&SS, **291**, 337
5. Stark, M. A. & Wade, R. A., *Single and Composite Hot Subdwarf Stars in the Light of 2MASS Photometry*, 2003, AJ, **126**, 1455
6. Sharpee, B., Stark, M., Pritzl, B., Smith, H., Silbermann, N., Wilhelm, R., & Walker, A., *BV Photometry of Variable Stars in the Northeast Arm of the Small Magellanic Cloud*, 2002, AJ, **123**, 3216
7. Stark, M. A., & Taylor, J. M., *A New Short Period Variable Star in Cygnus*, 2002, Info. Bull. on Variable Stars, **5247**
8. Stark, M. A., Hamlin, M. T., Anderson, J. R., Berryman, F. V., Disbro, M. A., Dyni, C., Gates, T. A., McKinney, J. A., Robinson, K. W., Snavley, S. T., Stoltz, T. J., & Smith, H. A., *The Light Curve of the Eclipsing Binary Star XX Leo*, 2000, Journal of the American Assoc. of Variable Star Observers, **28**, 25

Unrefereed Publications and Papers in Preparation

1. Stark, M. A. & Wade, R. A., *Disentangling Composite Spectrum Hot Subdwarfs*, Astronomical Society of the Pacific Conference Series, submitted (astro-ph/0410286)
2. Wade, R. A., Stark, M. A., & Green, R. F. *How Many Hot Subdwarf Stars were Rejected from the PG Survey?*, Astronomical Society of the Pacific Conference Series, submitted (astro-ph/0410287)
3. Feigelson, E. D., Lawson, W. A., Stark, M. A., Townsley, L., & Garmire, G. P. *51 Eri and GJ3305: A 10 Myr old binary star system at 30 parsecs*, in preparation
4. Wade, R. A. & Stark, M. A., *Refined Coordinates to Hot Subdwarfs*, in preparation
5. Stark, M. A., Wade, R. A., Berriman, G. B. *Single and Composite Hot Subdwarf Stars in the Light of 2MASS All-Sky Photometry*, in preparation
6. Stark, M. A. & Wade, R. A., *Emission Line Objects in the Catalogue of Spectroscopically Identified Hot Subdwarfs*, in preparation
7. Stark, M. A., Wade, R. A., Smith, H. A., Miller, B., Andronov, I. L., Ostrova, N. I., Burwitz, V., & Thorstensen, J. R., *Discovery of an Unusual Variable Emission Line Star*, work in progress
8. Stark, M. A., Wade, R. A., *Spectroscopic Observations of Composite Spectrum Hot Subdwarfs*, in preparation
9. Stark, M. A., Wade, R. A., *Analysis of Spectroscopic Observations of Composite Spectrum Hot Subdwarfs*, in preparation
10. Stark, M. A., Wade, R. A., *Classification of Composite Spectrum Hot Subdwarfs*, in preparation