

Erika D. Grundstrom

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Education

Ph.D. Astronomy	Georgia State University	2007
Advisor: Dr. Douglas R. Gies	Thesis: <i>Hot Stars With Disks</i>	
M.S. Physics	Georgia State University	2006
B.S. Astronomy	University of Minnesota	2001
B.S. Physics	University of Minnesota	2000

Positions Held

Learning Sciences Institute Post-Doctoral Fellow	2007–present
Department of Physics & Astronomy, Vanderbilt University Conducted research on massive stars and on student perceptions of long timescales	
Graduate Research Assistant	2004–2007
Department of Physics & Astronomy, Georgia State University Conducted research on massive stars (singular and in binary systems) and supervised two undergraduate research projects	
Astronomy Co-Instructor	2004–2007
Department of Physics & Astronomy, Georgia State University Part of teaching team for ASTR 6300 - developed homework and projects for a teaching pedagogy course for graduate students	
Graduate Teaching Assistant	2002–2006
Department of Physics & Astronomy, Georgia State University Taught ASTR 1010 & 1020 labs to 19 sections of 5 – 25 students	
Astronomy Instructor	2005
Department of Physics & Astronomy, Georgia State University Taught ASTR 1010 to 45 students - developed homework, exams, projects and also various demonstrations for greater learning	
Lead Lab Coordinator	2004–2005
Department of Physics & Astronomy, Georgia State University Leader of 3-person team of Lab Coordinators - lab teaching, manual rewriting, scheduling, TA meeting leader, logistic issues	

Undergraduate Teaching Assistant 1999–2002

Department of Astronomy, University of Minnesota
 Taught ASTR 1001 labs to 11 sections of 20 – 24 students

Undergraduate Research Assistant

Department of Astronomy, University of Minnesota 2000–2002

Conducted research on synchrotron radiation from extragalactic radio sources

Department of Physics, University of Minnesota 1999

Conducted research on water vortex dynamics

Awards

Outstanding Graduate Teaching Assistant Award 2005

Partnership for Reform in Science and Mathematics (PRISM) 2005

Mini-Grant (\$8800 for use in teaching innovation)

Outstanding Graduate Teaching Assistant Award 2004

Students Supervised

Diana Gudkova – Berea College 2007

Johnathan Helsel – Grady High School 2006

Observing Experience

Kitt Peak National Observatory 2004–2006

0.9-m Coudé Feed Telescope with Spectrograph, 22 nights

InfraRed Telescope Facility 2006

3.0-m Telescope with the SpeX instrument, 2 nights

Kitt Peak National Observatory 2005

2.1-m Telescope with Spectrograph, 7 nights

Public Outreach

Hard Labor Creek Observatory, operated by GSU 2002–2007

Open House Coordinator 2004–2007

Co-hosted 10 public open houses

Astronomy Club at Georgia State University 2002–2007

President 2004–2007

Vice President 2003–2004

Annual Girl Scout Day at Fernbank Museum, Decatur, GA 2007

Organized astronomer participation, set up and performed demonstrations

Winnona Elementary School, Decatur, GA 2007

Barnard-Seyfert Astronomical Society, Nashville, TN 2007

Onizuka Center for International Astronomy, Mauna Kea, HI 2006

Invited speaker

Georgia Science Olympiad	2003–2006
Co-developed and managed Astronomy events for 7 th and 8 th grade students	
The Rooftop Observatory, operated by the U of MN	1999–2002
Hosted and co-hosted over 15 public nights, many also involving area Girl/Boy Scout troops (to whom we gave special presentations)	
Society of Physics Students, U of MN chapter	1998–2001
Outreach Co-Director	2000–2001
Co-developed, set up and performed several demonstrations and lectures for groups ranging from K–12 to college students to adults	

Meetings Attended

American Astronomical Society Meeting #209	2007
NASA CAE Workshop: Advanced Strategies for Creating a Learner-Centered Introductory Astronomy Course: A Teaching Excellence Workshop	2007
Michelson Summer Workshop - Frontiers in Interferometry	2006
American Astronomical Society Meeting #208	2006
NASA CAE Teaching Excellence in Introductory Astronomy Workshop	2006
Partnership for Reform in Science and Mathematics Critical Site Visit	2005
Partnership for Reform in Science and Mathematics Institute Workshop	2005
American Astronomical Society Meeting #206	2005
Cosmos in the Classroom	2004
American Astronomical Society Meeting #203	2004
Michelson Interferometry Summer School	2003
Synthesis Imaging Summer School (NRAO)	2002
American Astronomical Society Meeting #199	2002
Astronomical Society of the Pacific Annual Meeting	2001

Refereed Publications

1. Grundstrom, E. D., Gies, D. R., Hillwig, T. C., McSwain, M. V. Smith, N., Gehrz, R. D., Kaufer, A., & Stahl, O., *A Spectroscopic Study of the Mass Outflow in the Massive Interacting Binary RY Scuti*, 2007, ApJ, 667, 505
2. Grundstrom, E. D., Boyajian, T. S., Finch, C., Gies, D. R., Huang, W., McSwain, M. V., O'Brien, D. P., Riddle, R. L., Trippe, M. L., Williams, S. J., Wingert, D. W., & Zaballa, R. A., *Joint H α and X-ray Observations of Massive X-ray Binaries III. The Be X-ray Binaries HDE 245770 = A 0535 +26 and X Persei*, 2007, ApJ, 660, 1398
3. Grundstrom, E. D., Caballero-Nieves, S. M., Gies, D. R., Huang, W., McSwain, M. V., Rafter, S. E., Riddle, R. L., Williams, S. J., & Wingert, D. W., *Joint H α and X-ray Observations of Massive X-ray Binaries II. The Be X-Ray Binary and Microquasar LS I +61 303*, 2007, ApJ, 656, 437
4. Grundstrom, E. D., Blair, J. L., Gies, D. R., Huang, W., McSwain, M. V., Raghavan, D., Riddle, R. L., Subasavage, J. P., Wingert, D. W., Levine, A. M., & Remillard, R.

- A., *Joint H α and X-ray Observations of Massive X-ray Binaries I. The B-Supergiant System LS I +65 010 = 2S 0114+650*, 2007, ApJ, 656, 431
5. Grundstrom, E. D. & Gies, D. R., *Estimating Be Star Disk Radii using H α Equivalent Widths*, 2006, ApJ, 651, L53
 6. McSwain, M. V., Huang, W., Gies, D. R., Grundstrom, E. D., & Townsend, R. H. D., *The B and Be Star Population of NGC 3766*, ApJ in press (10 January, 2008 issue), arXiv:0710.0137
 7. Boyajian, T. S., Gies, D. R., Dunn, J. P., Farrington, C. D., Grundstrom, E. D., Huang, W., McSwain, M. V., Williams, S. J., Wingert, D. W., Fullerton, A. W., & Bolton, C. T., *The Long Period, Massive Binaries HD 37366 and HD 54662: Potential Targets for Long Baseline Optical Interferometry*, 2007, ApJ, 664, 1121
 8. Boyajian, T. S., Gies, D. R., Baines, E. K., Barai, P., Grundstrom, E. D., McSwain, M. V., Parks, J. R., Riddle, R. L., Ryle, W. T., & Wingert, D. W., *Radial Velocities of Six OB Stars*, 2007, PASP, 119, 742
 9. McSwain, M. V., Ransom, S. M., Boyajian, T. S., Grundstrom, E. D., & Roberts, M. S. E., *Runaway Massive Binaries and Cluster Ejection Scenarios*, ApJ, 2007, 660, 740
 10. McSwain, M. V., Boyajian, T. S., Grundstrom, E. D., & Gies, D. R., *A Spectroscopic Study of Field and Runaway OB Stars*, ApJ, 2007, 655, 473
 11. Gies, D. R., Bagnuolo, Jr., W. G., Baines, E. K., ten Brummelaar, T. A., Farrington, C. D., Goldfinger, P. J., Grundstrom, E. D., Huang, W., McAlister, H. A., Mérand, A., Sturmann, J., Sturmann, L., Touhami, Y., Turner, N. H., Wingert, D. W., Berger, D. H., McSwain, M. V., Aufdenberg, J. P., Ridgway, S. T., Cochran, A. L., Lester, D. F., Sterling, N. C., Bjorkman, J. E., Bjorkman, K. S., & Koubský, P., *CHARA Array K 2 -band Measurements of the Angular Dimensions of Be Star Disks*, 2007, ApJ, 654, 527
 12. McAlister, H. A., ten Brummelaar, T. A., Gies, D. R., Huang, W., Bagnuolo, Jr., W. G., Shure, M. A., Sturmann, J., Sturmann, L., Turner, L. H., Taylor, S. F., Berger, D. H., Baines, E. K., Grundstrom, E., Ogden, C., Ridgway, S. T., & van Belle, G., *First Results from the CHARA Array. I. An Interferometric and Spectroscopic Study of the Fast Rotator α Leonis (Regulus)*, 2005, ApJ, 628, 439
 13. Boyajian, T. S., Beaulieu, T. D., Gies, D. R., Grundstrom, E., Huang, W., McSwain, M. V., Riddle, R. L., Wingert, D. W., & De Becker, M., *The Massive Runaway Stars HD 14633 and HD 15137*, 2005, ApJ, 621, 978
 14. Peters, G. J., Gies, D. R., Grundstrom, E. D., & McSwain, M. V., *Detection of a Hot Subdwarf Companion to the Be Star FY CMa*, in preparation
 15. Roberts, Jr., L. C., Mason, B. D., Berger, D. H., McSwain, M. V., Parks, R. J., Gies, D. R., & Grundstrom, E. D., *Multi-color Photometry of the Open Cluster Collinder 419*, in preparation

Abstracts and Posters

1. Grundstrom, E., Gies, D. R., & Wilson, J. W., *Teaching Astronomy Graduate Students About Teaching at the 101 Level*, 2006, AAS 209, #157.04
2. Grundstrom, E., Gies, D. R., Boyajian, T. S., Williams, S. R., & Wingert, D. W., *Be Star Spectra: Disk Variability and Radial Velocity Variations*, 2006, AAS 209, #81.04
3. McSwain, M. V., Boyajian, T. S., Grundstrom, E., & Gies, D. R., *Ejection of Runaway Binary Stars*, 2006, IAU S240, #179
4. Grundstrom, E., Gies, D. R., Blair, J., Caballero-Nieves, S., Finch, C., O'Brien, D., Rafter, S., Raghavan, D., Subasavage, J., Trippe, M., Williams, S., Zaballa, R., Huang, W., McSwain, M. V., & Wingert, D. W., *Spectroscopy of Be X-ray Binaries*, 2006, AAS 208, #4.10
5. McSwain, M. V., Boyajian, T. S., Grundstrom, E., & Gies, D. R., *A Search for Quiet Massive X-ray Binaries*, 2005, AAS 207, #114.02
6. Grundstrom, E., Gies, D. R., & McSwain, M. V., *Orbital Variability of H α Emission in the Massive Binary RY Scuti*, 2005, AAS 206, #40.07
7. Grundstrom, E., Baines, E., & Gies, D. R., *Innovative Astronomy Teaching Using Lecture Activities*, 2005, AAS 206, #2.09
8. Ruiz, B., Grundstrom, E., Marshall, K., McFarland, J. P., McSwain, M. V., Osterman, M. A., Veerabathina, N., & Wingert, D. W., *Urban Astronomy: The Astronomy Club at Georgia State University*, 2003, AAS 203, #19.11
9. Grundstrom, E., Rudnick, L., & Blundell, K. M., *Shapes of Synchrotron Spectra from Fanaroff-Riley II Sources*, 2001, AAS 199, #57.01
10. Grundstrom, E., Pinnick, E. & Kakalios, J., *Rotating Cylinders in a Water Tank: Vortex Diffraction Effects*, 2001, APS MAR01, #15.009

Oral Presentations

1. Grundstrom, E. D., 2005, Contributed Talk (Partnership for Reform in Science and Mathematics Critical Site Visit): *Using Lecture Activities in the Astronomy Classroom*
2. Grundstrom, E. D., 2005, Invited Talk (Partnership for Reform in Science and Mathematics Report): *The Effectiveness of Lecture Activities in the College Astronomy Classroom*
3. Grundstrom, E. D., 2005, Invited Talk (Partnership for Reform in Science and Mathematics Leadership Meeting): *Fun Astronomy Lecture Activities Courtesy of a PRISM Mini-Grant*