

Stephen S. Eikenberry

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Professional Positions

2008-present	Colonel Allan R. and Margaret G. Crow Term Professor of Astronomy <i>University of Florida</i>
2003-present	Professor of Astronomy <i>University of Florida</i>
2002-2003	Associate Professor of Astronomy (with tenure) <i>Cornell University</i>
1998-2002	Assistant Professor of Astronomy (tenure-track) <i>Cornell University</i>
1997-1998	Sherman H. Fairchild Postdoctoral Prize Fellow in Physics <i>California Institute of Technology</i>
1992-1997	Graduate Research Assistant in Astronomy <i>Harvard University</i>

Education

1997	Ph.D., Astronomy, Harvard University
1994	M.A., Astronomy, Harvard University
1990	S.B., Physics, Massachusetts Institute of Technology
1990	S.B., Literature, Massachusetts Institute of Technology

Honors/Awards

2008	Colonel Allan R. and Margaret G. Crow Term Professorship <i>University of Florida</i>
2000-2005	Faculty Early Career Development (CAREER) Award <i>National Science Foundation</i>
1997	Sherman H. Fairchild Postdoctoral Prize Fellowship in Physics <i>California Institute of Technology</i>
1997	Fireman Award for Graduate Student Research in Astrophysics <i>Harvard University</i>
1996	Derek Bok Award for Excellence in Science Teaching <i>Harvard University</i>
1994-1997	NASA Graduate Student Researchers Program Fellowship <i>Harvard University</i>

Research Interests

- Astronomical instrumentation, particularly state-of-the-art optical/infrared instruments for large telescopes, high-speed photometry, and novel semiconductor detector architectures
- Application of multi-use instrumentation technology to astrophysics, remote sensing, and biomedical imaging (particularly cardiac/neural imaging)
- Microquasars and relativistic jet formation in black hole systems
- Physics and populations of accreting X-ray binaries (particularly ultra-luminous X-ray sources) in the Milky Way and external galaxies
- Massive star formation, evolution, and evolutionary end-products
- Co-evolution of supermassive black holes with galaxies and stellar populations in galactic centers
- Pulsars, magnetars, and isolated neutron stars

Current Major Research Efforts

- Principal Investigator for FLAMINGOS-2 – the facility wide-field near-infrared imager and multi-object spectrograph for the Gemini Observatory (2003-present). Leading the University of Florida instrumentation team for this \$5M project, including 17 engineers, technicians, and scientists at UF, as well as staff at various subcontractors. First light planned in 2008.
- Principal Investigator for the FLAMINGOS-2 Early Science Surveys (F2ESS) – a group of three surveys on the Galactic Center, galaxy evolution, and star formation, involving 8 UF faculty and more than 20 other scientists from 5 countries.
- US co-Principal Investigator for the Gemini Genesis Survey (PI R. Abraham – U. Toronto), an adaptive optics imaging search to detect “First Light” galaxies at $z \sim 8-12$ in the “dark” windows between OH lines in the J- and H-bands.
- Principal Investigator for the Canarias InfraRed Camera Experiment (CIRCE) – a near-infrared imager for the 10.4-m Gran Telescopio Canarias funded by the University of Florida and National Science Foundation. CIRCE is intended to serve as a “training instrument” for graduate students and postdocs to gain experience in instrument design, integration, and commissioning. First light planned in Spring 2009.
- IFU lead and co-PI for FRIDA – the facility adaptive optics near-infrared imager and integral field spectrograph for the Gran Telescopio Canarias 10.4-m telescope (PI J.A. Lopez – UNAM)
- Development of L3CCD imaging technology for multi-use applications in Adaptive Optics, Biomedical Imaging, and Space Imaging, in collaboration with Prof. W. Ditto (UF Biomedical Engineering) and Prof. N. Fitz-Coy (UF Mechanical & Aerospace Engineering)
- Studies of unusually massive stars, including LBV 1806-20 (measurement by our group listed as the most massive known in the Guinness Book of World Records 2008 edition).
- Team member for the Keck Observatory Next Generation Adaptive Optics project
- Team member for the Thirty Meter Telescope InfraRed Imaging Spectrograph

Other Astronomical Instrumentation Experience

- Principal Investigator for the High-Resolution Near-Infrared Spectrograph (HRNIRS), a facility instrument proposed for the Gemini Observatory. Led the consortium team (major partners University of Florida and NOAO, as well as HIA, U. Rochester, U. Texas) which won the March 2005 competitive Conceptual Design Review for this \$29.8M instrument. Project currently awaiting funding allocation from Gemini.
- Principal Investigator for the near-Infrared Multi-Object Spectrograph (IRMOS) feasibility study for the Thirty Meter Telescope – a partnership between the University of Florida and HIA. The design reference missions for IRMOS are studying the properties of high-redshift galaxies ($z > 8$) and the detailed structure and evolution of galaxies at the epoch of peak star formation ($z \sim 2-3$). IRMOS successfully completed its Feasibility Study phase for TMT in late 2006, and has an estimated cost of ~\$60M.
- Principal Investigator for the Wide-field Infrared Camera (WIRC) on the Palomar 5-m telescope. WIRC provides a 8.7×8.7 -arcmin FOV with 0.25-arcsec pixels on a HAWAII-2 science-grade detector array. Fully commissioned in September 2002, WIRC had the largest area* ω throughput of any infrared camera to-date, and successfully produced 0.5-arcsec images across the entire field of view on its “firstlight” observing run. WIRC is currently available as a general-user facility instrument and is the most-requested instrument for the Palomar 5-m telescope.
- Principal Investigator for the Florida Image Slicer for Infrared Cosmology & Astrophysics (FISICA) – an image slicing integral field unit for the FLAMINGOS spectrograph. Originally conceived as a technology testbed for a novel monolithic diamond-turning approach to image slicer manufacture, FISICA has been producing high-quality scientific observations on the KPNO 4-meter competitive with the world’s leading infrared integral field units such as the GNIRS IFU on Gemini.
- Leader in the field of photon-counting infrared high-speed photometers based on Solid-State Photomultiplier (SSPM) technology. Member of the team that designed, built, and implemented the world’s first such instrument in 1994. Principal Investigator for several high-speed infrared photometers and cameras for rapid photometry and imaging/ wavefront-sensing on several large telescopes, including the Palomar 5-m, MMT, and Keck 10-m telescopes
- Inventor of novel quantum-well semiconductor structures for infrared detectors and optical devices for simultaneous differential imaging for optical/infrared astronomy (patents pending).

Service & Teaching

- Teaching astronomy and cross-listed astronomy/physics courses from introductory non-major classes to advanced graduate seminars at both UF and Cornell. Recent classes include Astronomy 1002 (introduction to astronomy for non-science majors) and Astronomy 7939 (graduate course on neutron stars and black holes). At Cornell, developed the new course Astronomy 234 (sophomore level introduction to data analysis). At Cornell, nominated by department in 2002 for university-wide teaching award.
- Member of Astronomy Department graduate admissions committee (Cornell 1998- 1999, 2002; UF 2003-present); time allocation committee (Cornell 1998-2000; UF 2005-present); international committee (UF 2003-present); instrumentation oversight committee (UF 2003-present); faculty search committees (UF 2003, 2004, 2005; committee chair 2004); Astronomy Department colloquium chairman (Cornell 1999-2000)
- Member of faculty search committees for Mechanical & Aerospace Engineering (Cornell, 2001-2002) and Physics (UF 2004-2005, 2007)
- Member of the UF CLAS Research Committee (2006-2007)
- Member of the Visiting Committee for the Instituto Astrofisica de Canarias – the largest astronomy research institute in Spain (2006)
- Member of NASA’s Independent Review Team for the Stratospheric Observatory for Infrared Astronomy (SOFIA) (2004-2006)
- Invited panelist for the NSF/DRG joint panel on US/German ventures in photonic technology for astrophysics applications (2007)
- Member of the NSF’s Giant Segmented Mirror Telescope Science Working Group (2007)
- Invited panelist for the NSF Adaptive Optics Roadmap Working Group (2007)
- Supervisor of the Hewitt Laboratory for Computation and Visualization in Astronomy at Cornell (1999-2002). Led a team designing and implementing a lab containing 16 state-of-the-art Linux and Windows workstations, as well as scanning and printing facilities for undergraduate students working in the Space Sciences building. The Hewitt Lab serves as the classroom for Astronomy 234.

Graduate Students Supervised

Thesis supervisor for Dae-Sik Moon (PhD in Astronomy, 2003, Cornell University). Thesis titled “Instrument Development for High-Speed Infrared and Optical Photometry and Observational Studies of Pulsars”. Dae-Sik held the Millikan Postdoctoral Prize Fellow in Physics at the California Institute of Technology, and is currently an Assistant Professor of Astronomy at the University of Toronto.

Thesis supervisor for Joseph Carson (PhD in Astronomy, 2004, Cornell University). Thesis titled “The Cornell High-order Adaptive Optics Survey for Brown Dwarf Companions and Related Instrumentation Studies for Brown Dwarf Research”. Joe is currently a postdoctoral fellow in the Max Planck Institute for Astronomy in Heidelberg, Germany.

Co-supervisor (with E. Kan) for Jami Meteer (PhD in Electrical Engineering, 2004, Cornell University). Thesis titled “Quantum Well Electron Gain Structures for Improved Infrared Detector Read Noise Performance”. Jami is currently an engineer with Intel.

Co-supervisor (with R. Lovelace) for David Rothstein (PhD in Astronomy 2006, Cornell University). Thesis titled “Relativistic Jets in Microquasars: Theory and Observation”. Dave is currently a NSF Astronomy & Astrophysics Postdoctoral Fellowship.

Thesis Supervisor for David Clark (PhD in Astronomy 2007, University of Florida). Thesis titled “Multiwavelength Studies of X-ray Sources in External Galaxies”. Dave is currently an UNAM Postdoctoral Fellow at the Instituto de Astronomia in the Universidad Nacional Autonoma de Mexico.

Thesis co-Supervisor (with R. Bandyopadhyay) for Michelle Edwards (PhD in Astronomy, expected 2008, University of Florida). Thesis titled “Emission-line Surveys for the Massive Stellar Environments of Magnetars and Associated Infrared Instrumentation”.

Thesis Supervisor for Valerie Mikles (PhD in Astronomy, expected 2008, University of Florida). Thesis titled “Multiwavelength Studies of Relativistic Jet Formation in Microquasars and Searches for New Systems”.

Thesis Supervisor for Miguel Charcos (PhD in Astronomy, expected 2009, University of Florida). Thesis titled “Spectropolarimetry of Relativistic Jets from X-ray Binaries”.

Thesis co-Supervisor (with R. Bandyopadhyay) for Curtis Dewitt (PhD in Astronomy, expected 2010, University of Florida). Thesis titled “The FLAMINGOS-2 Galactic Center Survey”.

Publications

Articles in Refereed Journals

- 2007 “HST/NICMOS Observations of Fast Infrared Flickering from the Microquasar GRS 1915+105”, Eikenberry,S.S., Patel,S.G., Rothstein,D.M., Remillard,R., Pooley,G., Morgan,E.H., *ApJ*, in press.
- 2007 “Infrared Counterparts to Chandra X-Ray Sources in the Antennae”, Clark, D.M., Eikenberry,S.S., Brandl, B.R., Wilson, J.C., Carson, J.C., Henderson, C.P., Hayward, T.L., Barry, D.J., Ptak, A.F., Colbert, E.J.M., *ApJ*, 658, 401
- 2006 “Identification of the Infrared Counterpart to a Newly Discovered X-Ray Source in the Galactic Center”, Mikles, Valerie J.; Eikenberry, Stephen S.; Muno, Michael P.; Bandyopadhyay, Reba M.; Patel, Shannon, *ApJ*, 651, 408
- 2006 “CHAOS: The Cornell High-order Adaptive Optics Survey for Brown Dwarf Companions – II: Analysis and Results”, Carson,J.C., Eikenberry,S.S., Brandl,B.R., Hayward,T.H., Wilson,J.C. *AJ*, 132, 1146
- 2006 “FISICA Observations of the Starburst Galaxy NGC 1569”, Clark, D.M., Eikenberry,S.S., Raines,S.N., Gruel,N., Elston,R., Guzman,R., Julian,J., Boremann,G., Glenn,P.E., Hull-Allen,G., Hoffmann,J., Rodger,M., Thompson,K., Flint,S., Comstock,L. Myrick,B., *NewAR*, 50, 433
- 2006 “FRIDA: Diffraction limited imaging and integral field spectroscopy with GTC”, López, J. A., Bringas, V., Cuevas, S., Díaz, J. J., Eikenberry, S., Espejo, C., Flores, R., Fuentes, F. J., Gallego, J., Garzón, F, *RMxAC*, 26, 151
- 2006 “X-Ray Quasi-periodic Oscillations in GRS 1915+105: Clues to the Infrared Flares?”, Mikles,V.A., Eikenberry,S.S., Rothstein,D.M., *ApJ*, 637, 978
- 2006 “FISICA: The Florida image slicer for infrared cosmology and astrophysics”, Eikenberry,S.S., Elston, R., Guzman,R., Raines,S.N., Julian,J., Gruel,N., Boreman,G., Hoffmann,J., Rodgers,M., Glenn,P., *NewAR*, 50, 365
- 2006 “FRIDA: The infrared imager and integral field spectrograph for the adaptive optics system of GTC”, Cuevas, S., López, J. A., Eikenberry, S., Sánchez, B., Watson, A., Garzón, F., Prieto, A., Fuentes, J., Díaz, J. J., Espejo, C., *NewAR*, 50, 389
- 2005 “The Antennae Ultra-Luminous Source X-37 is a Background Quasar”, Clark,D.M., Christopher,M., Eikenberry,S.S., Brandl,B.R., et al., *ApJ Letters*, 631, 109
- 2005 “CHAOS: The Cornell High-order Adaptive Optics Survey for Brown Dwarf Companions – I: Observations and Data Reduction”, Carson,J.C., Eikenberry,S.S., Brandl,B.R., Hayward,T.H., Wilson,J.C. *AJ*, 130, 1212
- 2005 “ Wide-field Near-Infrared Camera Images of the Antennae Galaxies”, Brandl,B.R., Clark,D.M., Eikenberry,S.S., et al., *ApJ*, 635, 280
- 2005 “Observations of Rapid Disk-Jet Interaction in the Microquasar GRS 1915+105”, Rothstein, David M.; Eikenberry, Stephen S.; Matthews, Keith, *ApJ*, 626 991

Articles in Refereed Journals (cont.)

- 2005 "Near-Infrared, Kilosecond Variability of the Wisps and Jet in the Crab Pulsar Wind Nebula", Melatos, A.; Scheltus, D.; Whiting, M. T.; Eikenberry, S. S.; Romani, R. W.; Rigaut, F.; Spitkovsky, A.; Arons, J.; Payne, D. J. B., *ApJ*, 633, 931
- 2004 "Infrared Observations of the Candidate LBV 1806-20 and Nearby Cluster Stars", Eikenberry, S. S.; Matthews, K.; LaVine, J. L.; Garske, M. A.; Hu, D.; Jackson, M. A.; Patel, S. G.; Barry, D. J.; Colonna, M. R.; Houck, J. R., *ApJ*, 616, 506
- 2004 "PSR B1951+32: A Bow Shock-confined X-Ray Nebula, a Synchrotron Knot, and an Optical Counterpart Candidate ", Moon, D.-S.; Lee, J.-J.; Eikenberry, S. S.; Koo, B.-C.; Chatterjee, S.; Kaplan, D. L.; Hester, J. J.; Cordes, J. M.; Gallant, Y. A.; Koch-Miramond, L., *ApJ Letters*, 610, L33
- 2004 "The connection between W31, SGR 1806-20, and LBV 1806-20: Distance, extinction, and structure ", Corbel, S. & Eikenberry, S.S., *A&A*, 419, 191
- 2004 "A low-temperature Si/SiGe impact diode for improved infrared sensing", Meteer, J.A.; Eikenberry, S.S.; Huffman, J.E.; Kan, E.C, IEEE Device Research Conference, 62nd DRC. Conference Digest, Vol. 1, 177
- 2003 "Untwisting the Tornado: X-Ray Imaging and Spectroscopy of G357.7-0.1", Gaensler, B. M.; Fogel, J. K. J.; Slane, P. O.; Miller, J. M.; Wijnands, R.; Eikenberry, S. S.; Lewin, W. H. G., *ApJ Letters*, 594, L35
- 2003 "The recent expansion of Pluto's atmosphere ", Elliot, J. L.; Ates, A.; Babcock, B. A.; Bosh, A. S.; Buie, M. W.; Clancy, K. B.; Dunham, E. W.; Eikenberry, S. S.; Hall, D. T.; Kern, S. D.; *Nature*, 424, 165
- 2003 "A New Search Technique for Short Orbital Period Binary Pulsars ", Ransom, Scott M.; Cordes, James M.; Eikenberry, Stephen S., *ApJ*, 589, 911
- 2003 "The Environments of SGRs: A Brief & Biased Review ", Eikenberry, Stephen S., GAMMA-RAY BURST AND AFTERGLOW ASTRONOMY 2001: A Workshop Celebrating the First Year of the HETE Mission. AIP Conference Proceedings, Volume 662, pp. 574-578 (2003).
- 2003 "The Evolution of LMC X-4 Flares: Evidence for Super-Eddington Radiation Oozing through Inhomogeneous Polar Cap Accretion Flows?" D.S. Moon, S.S. Eikenberry, & I. Wasserman, 2003, *ApJ*, 586, 1280
- 2002 "SMC X-1 as an Intermediate Stage Flaring X-ray Pulsar", Moon, D.S., Eikenberry, S.S., Wasserman, I., *ApJ Letters*, 582, L91
- 2002 "Revised Infrared Astrometry and a Counterpart for the Microquasar GRS 1758-258", Rothstein, D.M., Eikenberry, S.S., Heindl, W., Egami, E., Djorgovski, S.G., *ApJ Letters*, 580, L61
- 2002 "Fourier Techniques for Very Long Astrophysical Time-Series Analysis", Ransom, Scott M.; Eikenberry, Stephen S.; Middleditch, John, *AJ*, 124, 1788
- 2001 "Possible Infrared Counterparts to the Soft Gamma-Ray Repeater SGR 1806-20", Eikenberry, S.S., Garske, M.A., Hu, D., Jackson, M.A., Patel, S.G., Barry, D.J., Colonna, M.R., Houck, J.R., 2001, *ApJ Letters*, 563, L133

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- 2001 "Twenty Years of Timing SS433", Eikenberry, S.S., Cameron, P.B., Fierce, B.W., Kull, D.M., Dror, D.H., Houck, J.R., 2001, *ApJ*, 561, 1027.
- 2001 "Fourier Techniques for the Analysis of Long Astrophysical Time Series", Ransom, S.M., Eikenberry, S.S., Middleditch, J. 2001, *AJ*, in press.
- 2001 "Discovery of Coupling between Periodic and Aperiodic Variability and X-ray Quasi-Periodic Oscillations in Her X-1", Moon, D.S., Eikenberry, S.S., *ApJ Letters*, 552, L135
- 2001 "Deep Infrared Imaging of the Microquasars 1E1740-2942 and GRS 1758-258", Eikenberry, S.S., Fischer, W.J., Egami, E., Djorgovski, S.G., *ApJ*, 556, 1
- 2001 "A Next Generation High-Speed Data Acquisition System for Multi-channel Infrared and Optical Photometry", Moon, D.S., Pirger, B.E., Eikenberry, S.S., *PASP*, 113, 646
- 2001 "Large X-ray Flares from LMC X-4: Discovery of Millihertz Quasi-Periodic Oscillations and QPO-Modulated Pulsations", Moon, D.S., Eikenberry, S.S., *ApJ Letters*, 549, L225.
- 2001 "A Binary Millisecond Pulsar in Globular Cluster NGC 6544", Ransom, S.M., Greenhill, L.J., Herrnstein, J.R., Manchester, R.N., Camilo, F., Eikenberry, S.S., Lyne, A.G. *ApJ Letters*, 546, L25.
- 2001 "Three Modes of Long-wavelength Flaring in GRS 1915+105: Implications for Jet Formation", Eikenberry, S.S., *Ap&SS*, 276, 101
- 2001 "On the Mass-Donating Star in GRS 1915+105", Eikenberry, S.S., Bandyopadhyay, R.M., *Ap&SS*, 276, 39
- 2001 "The Optical/Infrared Astronomical Quality of High Atacama Sites. II. Infrared Characteristics", Giovanelli, R.; Darling, J.; Henderson, C.; Hoffman, W.; Barry, D.; Cordes, J.; Eikenberry, S.; Gull, G.; Keller, L.; Smith, J. D.; Stacey, G., *PASP*, 113, 803
- 2001 "The Optical/Infrared Astronomical Quality of High Atacama Sites. I. Preliminary Results of Optical Seeing", Giovanelli, R.; Darling, J.; Sarazin, M.; Yu, J.; Harvey, P.; Henderson, C.; Hoffman, W.; Keller, L. Barry, D.; Cordes, J.; Eikenberry, S.; Gull, G.; Harrington, J.; Smith, J. D.; Stacey, G.; Swain, M., *PASP*, 113, 789
- 2000 "On the Mass-Donating Star in GRS 1915+105", Eikenberry, S.S., Bandyopadhyay, R.M., *ApJ Letters*, 545, L131.
- 2000 "Search for an Infrared Counterpart to SGR 1900+14", Eikenberry, S.S. & Dror, D.H., *ApJ*, 537, 429.
- 2000 "Faint Infrared Flares from the Microquasar GRS 1915+105", Eikenberry, S.S., Matthews, K., Munro, M., Blanco, P.R., Morgan, E.H., Remillard, R.A., *ApJ Letters*, 532, L33
- 1998 "Spectroscopy of Infrared Flares from the Microquasar GRS 1915+105", Eikenberry, S.S., Matthews, K., Murphy, T.W., Nelson, R.W., Morgan, E.H., Remillard, R.A., *ApJ Letters*, 506, L31

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- 1998 ``Evidence for a Disk-Jet Interaction in the Microquasar GRS 1915+105", Eikenberry, S.S., Matthews, K., Morgan, E.H., Remillard, R.A., Nelson, R.W., *ApJ Letters*, 494, L61
- 1998 ``The Energetic Afterglow of the γ -ray Burst of 14 December 1997", Ramaprakash, A.N., Kulkarni, S.R., Frail, D.A., Koresko, C., Kuchner, M., Goodrich, R., Neugebauer, G., Murphy, T., Eikenberry, S., Bloom, J.S., Djorgovski, S.G., Waxman, E., Frontera, F., Feroci, M., Nicastro, L., *Nature*, 393, 43.
- 1998 ``ROSAT Timing of the LMC Pulsar 0540-69", Eikenberry, S.S., Fazio, G.G., Ransom, S.M., *ApJ*, 492, 754.
- 1997 ``High Time Resolution Infrared Observations of the Crab Nebula Pulsar and the Pulsar Emission Mechanism", Eikenberry, S.S., Fazio, G.G., Ransom, S.M., Middleditch, J., Kristian, J., Pennypacker, C.R., *ApJ*, 477, 465.
- 1997 ``The Infrared to Gamma-Ray Pulse Shape of the Crab Nebula Pulsar", Eikenberry, S.S. and Fazio, G.G., *ApJ*, 476, 281.
- 1997 ``Time Evolution and the Nature of the Near-Infrared Jets in GRS 1915+105", Eikenberry, S.S. and Fazio, G.G., *ApJ Letters*, 475, L53.
- 1996 ``An SSPM-Based High-Speed Near-Infrared Photometer for Astronomy", Eikenberry, S.S., Fazio, G.G., Ransom, S.M., *PASP*, 108, 939.
- 1996 ``Infrared-to-Ultraviolet Wavelength-Dependent Variations Within the Pulse Profile Peaks of the Crab Nebula Pulsar", Eikenberry, S.S., Fazio, G.G., Ransom, S.M., Middleditch, J., Kristian, J., Pennypacker, C.R., *ApJ Letters*, 467, L85.
- 1994 ``High Time Resolution Infrared Observations of the Crab Nebula Pulsar", Ransom, S.M., Fazio, G.G., Eikenberry, S.S., Middleditch, J., Kristian, J., Hays, K., Pennypacker, C.R., *ApJ Letters*, 431, L43.

Theses

- 1997 ``Development of Solid State Photomultiplier-Based Infrared High Speed Photometers and High Time Resolution Observations of Young Pulsars", Ph.D. Thesis, Harvard University. Supervisor: Dr. Giovanni Fazio
- 1994 ``The Galactic Distribution of Low-Mass X-ray Binaries", Masters Thesis, Harvard University. Supervisor: Prof. Jonathan Grindlay

Conference Proceedings & Other Articles

- 2006 "FLAMINGOS-2: the facility near-infrared wide-field imager and multi-object spectrograph for Gemini", Eikenberry, Stephen; Elston, Richard; Raines, S. Nicholas; Julian, Jeff; Hanna, Kevin; Hon, David; Julian, Roger; Bandyopadhyay, R.; Bennett, J. Greg; Bessoff, Aaron, *Proc. Of SPIE*, 6269, 39
- 2006 "Conceptual design for a high-resolution infrared spectrograph for the 8-m Gemini telescopes", Hinkle, Kenneth H.; Eikenberry, Stephen; Joyce, Richard; Liang, Ming; Muller, Gary; Hileman, Ed; French, Jim; Ge, Jian; Packham, Chris; Julian, Roger, *Proc. Of SPIE*, 6269, 117
- 2006 "FRIDA: integral-field spectrograph and imager for the adaptive optics system of the Gran Telescopio Canarias", López, J. A.; Bringas, V.; Cuevas, S.; Díaz, J. J.; Eikenberry, S. S.; Espejo, C.; Estrada, R.; Flores-Meza, R.; Fuentes, F. J.; Garzón, F., *Proc. Of SPIE*, 6269, 119
- 2006 "Optical design of the high-resolution near-infrared spectrograph", Liang, Ming; Joyce, R. R.; Eikenberry, S. S.; Hinkle, K. H.; Muller, G. P.; Ge, Jian; Sprayberry, David, *Proc. Of SPIE*, 6269, 139
- 2006 "Mechanical design of the Gemini high resolution near-infrared spectrograph", Muller, G. P.; Hileman, E. A.; Hinkle, K. H.; Joyce, R. R.; Liang, M.; Sprayberry, D.; Eikenberry, S. S., *Proc. Of SPIE*, 6269, 142
- 2006 "The MOAO system of the IRMOS near-infrared multi-object spectrograph for TMT", Andersen, David R.; Eikenberry, Stephen S.; Fletcher, Murray; Gardhouse, William; Leckie, Brian; Véran, Jean-Pierre; Gavel, Don; Clare, Richard; Guzman, Rafael; Jolissaint, Laurent; *Proc. Of SPIE*, 6269, 145
- 2006 "FISICA: the Florida imager slicer for infrared cosmology and astrophysics", Eikenberry, Stephen; Raines, S. Nicholas; Gruel, Nicolas; Elston, Richard; Guzman, Rafael; Julian, Jeff; Boreman, Glenn; Glenn, Paul; Hull-Allen, Gregory; Hoffman, Jeffrey, . *Proc. Of SPIE*, 6269, 146
- 2006 "Control software and user interface for the Canarias Infrared Camera Experiment (CIRCE)", Marín-Franch, Antonio; Eikenberry, Stephen S.; Charcos-Llorens, Miguel V.; Edwards, Michelle L.; Varosi, Frank; Hon, David B.; Raines, Steven N.; Warner, Craig D.; Rashkin, David, *Proc. Of SPIE*, 6269, 155
- 2006 "The Canarias Infrared Camera Experiment (CIRCE): optical and opto-mechanical design and manufacture", Edwards, M. L.; Eikenberry, S. S.; Marín-Franch, A.; Charcos-Llorens, M.; Rodgers, M.; Julian, J.; Raines, N.; Packham, C., *Proc. Of SPIE*, 6269, 157
- 2006 "Performance of F2T2 tandem tunable etalon", Scott, Alan; Javed, Maniyar; Abraham, Roberto; Eikenberry, Steve; Barton, Elizabeth; Bershad, Matthew; Bland-Hawthorn, Joss; Crampton, David; Doyon, Rene; Julian, Jeff, *Proc. Of SPIE*, 6269, 176
- 2006 "IRMOS: The near-infrared multi-object spectrograph for the TMT", Eikenberry, Stephen; Andersen, David; Guzman, Rafael; Bally, John; Cuevas, Salvador; Fletcher, Murray; Gardhouse, Rusty; Gavel, Don; Gonzalez, Anthony; Gruel, Nicolas;, *Proc. Of SPIE*, 6269, 188

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- 2006 "Systems engineering and performance modeling of the Gemini High-Resolution Near-Infrared Spectrograph (HRNIRS)", Eikenberry, Stephen; Hinkle, Kenneth; Joyce, Dick; Liang, Ming; Muller, Gary; Heileman, Ed; French, Jim; Ge, Jian; Packham, Chris; Julian, Roger;, *Proc. Of SPIE*, 6271, 31
- 2006 "An infrared photon-counting photometer based on the edge-illuminated solid-state photomultiplier", Moon, Dae-Sik; Eikenberry, Stephen S.; Fazio, Giovanni G., *Proc. Of SPIE*, 6276, 26
- 2004 "FISICA: the Florida image slicer for infrared cosmology and astrophysics", Eikenberry, Stephen S.; Elston, Richard; Guzman, Rafael; Julian, Jeff; Raines, S. Nicholas; Gruel, Nicolas; Boreman, Glenn; Glenn, Paul E.; Hull-Allen, C. Gregory; Hoffman, Jeff, *Proc. Of the SPIE*, 5492, 1264
- 2004 "FLAMINGOS-2: the facility near-infrared wide-field imager and multi-object spectrograph for Gemini", Eikenberry, Stephen S.; Elston, Richard; Raines, S. Nicholas; Julian, Jeff; Corley, Richard J.; Hanna, Kevin; Hon, David; Julian, Roger; Rashkin, David; Leckie, Brian, *Proc. Of the SPIE*, 5492, 1196
- 2004 "Overview and design of the Canarias infrared camera experiment (CIRCE)", Edwards, Michelle L.; Marin-Franch, Antonio; Eikenberry, Stephen S.; Rodgers, Michael; Julian, Jeff; Hanna, Kevin; Packham, Chris, *Proc. Of the SPIE*, 5491, 1710
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