

Charles R. Keeton: Curriculum Vitae

May 14, 2012

Positions Held

- 2011-present Faculty Director, Aresty Research Center for Undergraduates
Rutgers, the State University of New Jersey
- 2010-present Associate Professor, Physics and Astronomy Department
Rutgers, the State University of New Jersey
- 2004-2010 Assistant Professor, Physics and Astronomy Department
Rutgers, the State University of New Jersey
- 2001-2004 NASA Hubble Fellow, University of Chicago
- 1998-2001 Bart J. Bok Fellow, University of Arizona

Education

- June 1998 Ph.D. In Physics, Harvard University
Title: "Using Gravitational Lenses to Study Galaxies and Cosmology"
Supervisor: Christopher Kochanek
- May 1994 B.A. In Physics, *Summa Cum Laude*, Cornell University

Awards

- 2010 Rutgers University
Board of Trustees Fellowship for Scholarly Excellence
- 2010 Rutgers University
Presidential Fellowship for Teaching Excellence
- 2009 White House
Presidential Early Career Award for Scientists and Engineers (PECASE)
- 2007 Rutgers Society of Physics Students
Outstanding Teacher Award

Teaching

Course Title	Enrollment	Evaluation Responses	Teaching Effectiveness		Course Quality	
			Instructor	Dept. Mean	Instructor	Dept. Mean
S12 Astron. & Cosmol.	219	106	4.51	3.83	4.42	3.87
S12 Byrne Seminar	18					
F11 Astron. & Cosmol.	188	106	4.79	4.10	4.63	4.02
S11 Byrne Seminar	19					
S11 Astron. & Cosmol.	117	69	4.61	4.13	4.54	4.07
F10 Topics Astroph.	7	5	5.00	4.22	4.40	4.11
S10 Astron. & Cosmol.	188	93	4.68	4.09	4.46	4.04
S10 Honors Seminar	13	11	4.73	4.53	4.55	4.10
S09 Honors Seminar	9	8	5.00	4.58	4.88	4.06
F08 sabbatical						
S08 Princ. Astroph. (II)	47	28	4.75	4.29	4.61	4.18
F07 Princ. Astroph. (I)	45	34	4.94	4.64	4.76	4.47
S07 Princ. Astroph. (II)	40	29	4.86	4.00	4.72	3.92
F06 Princ. Astroph. (I)	47	36	4.95	4.26	4.73	4.09
S06 Princ. Astroph. (II)	35	21	4.88	4.19	4.64	4.03
F05 Princ. Astroph. (I)	25	18	4.78	4.36	4.55	4.20
S05 Galaxies and	8*	7	4.50	4.11	4.50	3.93
The Milky Way	4**	3	5.00	4.38	5.00	4.33

Notes:

- Student evaluations are on a scale of 1 (worst) to 5 (best).
- Byrne First-Year Seminars have different evaluation questions that do not correspond to the “Teaching Effectiveness” and “Course Quality” categories. Byrne Seminar titles were “The Dark Side of the Universe” (S11) and “Science Fiction, Science Fact” (S12).
- The interdisciplinary Honors Seminar in S09 and S10 was titled “The Preposterous Universe.”
- “Princ. Astroph.” denotes the two-semester advanced undergraduate course “Principles of Astrophysics.”
- Cross-listed course: *Undergraduate enrollment, **Graduate enrollment

Ongoing Graduate Research Supervised

Lisa Fishenfeld

Curtis McCully (joint supervision with Saurabh Jha)

Amitpal Tagore

Doctoral Theses Supervised

July 2010 Ross Fadely, “Multi-Wavelength Applications of Gravitational Lensing”

Ross is now a postdoc with Beth Willman at Haverford College.

March 2008 Arthur Congdon, “Probing Small-Scale Structure in Galaxies with Strong Gravitational Lensing”

Art earned a NASA-funded postdoctoral fellowship at the Jet Propulsion Laboratory in Pasadena, CA.

April 2006 Gregory Dobler, “Finite Source Gravitational Lensing: Theory and Applications”

Greg was a student at the University of Pennsylvania, but I was his primary research advisor. After finishing his Ph.D., he has held postdoc positions at the Harvard-Smithsonian Center for Astrophysics (2006-2009), and the University of California, Santa Barbara (2009-present).

Master's Theses Supervised

May 2012 Philip Naudus, “CDM Substructure Lensing”

Dec 2010 Eve LoCastro, “Galactic Spiral Structure as Density Waves”

Oct 2008 Matthew Klimek, “Parametrized Post-Newtonian Coefficients for Brans-Dicke Gravity with $d+1$ Dimensions”

Matthew's thesis was published as a peer-reviewed article in the journal Classical and Quantum Gravity.

July 2006 Attila Cangi, “A Detailed Study of the Gravitational Lens PG 1115+080”

Membership on Doctoral Thesis Committees

current Bob Lindner

current Michael Solway

April 2011 Amir Aazami (Duke University)

April 2011 Alberto Tegui (Duke University)

Sept 2009 Ricardo Zanmar Sanchez, “Measuring Mass: Non-Circular Motions of Gas in Disk Galaxies and Radial Velocities of Stars in a Globular Cluster”

April 2008 Sergio Lukic, “Geometric Features of String Theory at Low-Energy”

May 2006 Hua Yao, "Unoccupied Electronic Structure and CO Chemisorption Properties of Ultrathin Ni Films on Cu(100)"

Membership on Master's Thesis Committees

Nov 2010 Claudia Seitz, "Search for Hadronic Resonances in Multijet Final States with CDF"

Sept 2006 Sukbum Hong, "Fabry-Perot Observations of the Globular Cluster M28 (NGC 6626)"

Undergraduate Research Projects Supervised

2010-2012 Christina Krawiec

2009-2010 Brett Salmon, "Exploration of the Quintuple Quasar PMN J0134-0931"

Brett is now enrolled in the Ph.D. program in astronomy at Texas A&M University.

2009 Brandi Bernoskie, "Wiki-Based Documentation for gravlens/lensmodel"

Brandi is now enrolled in the Ph.D. program in philosophy of physics at the University of California, San Diego.

2006-2009 Jennifer van Saders, "Galaxy Shapes and Gravitational Lensing"

Jen received the Richard T. Weidner Prize from the Department of Physics & Astronomy, and the Henry Rutgers Scholars Award from the Rutgers SAS Honors Program. She is now enrolled in the Ph.D. program in astronomy at The Ohio State University.

2008-2009 Amanda Hood, "Gravitational Lens Modeling with Objective Priors"

Amanda is now enrolled in the Ph.D. program in applied math at Cornell University.

2008-2009 Adam Tomczak, "Gravitationally Lensed CO Emission in the Eight O'Clock Arc" (joint supervision with Prof. Andrew Baker)

Adam is now enrolled in the Ph.D. program in astronomy at Texas A&M University.

2007-2008 Jonathan Faiwieszewski, “The Search for Dark Matter: Gravitational Lensing and the Central Limit Theorem”

Jonathan is now in medical school at UMDNJ in Newark.

2005 Ian Boyle, “Gravitational Lensing Tutorial”

Ian is now a program and project manager at Merrill Lynch.

Mentorship

Rutgers School of Arts and Science Honors Program mentees:

2011-2012 Christopher Bober
Arran Gross

2010-2011 Rebecca Cebulka
Joshua Gang
Aziz Karakhanyan

2009-2010 Mihai Fararu
Matthew Potter
Christopher Reising
Leo Yu

2008-2009 Jude Busarello
Ariana Hackenburg
Alexander Lewis

2007-2008 Joshua Cooper
Meryl William

Invited Conference Presentations

2/17/2012 “Probing Dark Matter Substructure with Quasar Lensing”
First Light and Faintest Dwarfs: Extreme Probes of the Cold Dark
Matter Paradigm
Kavli Institute for Theoretical Physics, UC Santa Barbara

7/27/2010 “Complexity in Astrophysics”
Complex Systems Study, organized by MIT's Lincoln Laboratory on
behalf of the Director of Defense Research & Engineering for the U.S.
Department of Defense

- 6/2010 Invited lecturer, School of Astrophysics Francesco Lucchin
Madonna di Campiglio, Italy
- 4/2/2010 “How can Mathematics Reveal Dark Matter?”
Gravitational Lensing Workshop, University of South Florida, Tampa, FL
- 7/22/2009 “The Views from Strong Lensing”
Shedding Light on the Nature of Dark Matter, Keck Institute for Space
Studies, Caltech/JPL, Pasadena, CA
- 6/23/2009 “A Multi-Messenger Approach to Substructure Lensing”
Strong Gravitational Lensing in the Next Decade, Cogne, Italy
- 12/17/2008 “Astrophysical Applications of Stochastic Lensing”
Workshop on Probability and its Lensing Applications, Petters Research
Institute, Dangriga, Belize
- 10/31/2008 “Lensing Constraints on Dark Matter Substructure in Galaxies”
Tri-State Astronomy Conference (CT/NJ/NY), City University of New
York, NY
- 8/20/2008 “Lensing Constraints on Dark Matter Substructure in Galaxies”
Identification of Dark Matter 2008, Alba Nova, Stockholm, Sweden
- 6/14/2007 “Strong Lensing and Cosmology”
Searching for Strong Lenses in Large Imaging Surveys, Fermilab,
Batavia, IL
- 3/30/2007 “Parametric Lens Modeling”
School on Gravitational Lens Modeling, University of Valencia, Spain
- 1/22/2007 “Tests of Braneworld Gravity with Lensing”
Rethinking Gravity: From the Planck Scale to the Size of the Universe,
University of Arizona
- 1/10/2007 “Probing Dark Matter with Gravitational Lensing”
Geometric and Stochastic Lensing Workshop: Applications to Black
Holes and Dark Matter, Petters Research Institute, Dangriga, Belize
- 10/5/2006 “Cosmology with Strong Lensing”
Astrophysical Applications of Gravitational Lensing, Kavli Institute of
Theoretical Physics, University of California at Santa Barbara
- 1/25/2006 “Stochastic Gravitational Lensing and the Nature of Dark Matter”
Astrostatistics Workshop, Statistical and Applied Mathematical Sciences
Institute

- 10/24/2005 “A General Theory of Gravitational Lensing with Stochastic Substructure,” MKI Workshop on Dark Matter Substructure, Massachusetts Institute of Technology
- 11/8/2004 “The Importance of Lens Galaxy Environments”
Workshop on Gravitational Lensing, Institute for Advanced Study

Invited Colloquia and Seminars

- 5/11/2012 “Shedding Light on Dark Matter with Gravitational Lensing”
Astrophysics Seminar, Physics & Astronomy Department, University of Pittsburgh
- 3/8/2011 “Gravitational Lensing and Dark Matter Substructure”
Colloquium, Department of Astrophysical Sciences, Princeton University
- 9/30/2010 “Shedding Light on Dark Matter with Gravitational Lensing”
Colloquium, Physics & Astronomy Department, Texas A&M University-Commerce
- 9/16/2009 “Shedding Light on Dark Matter with Gravitational Lensing”
Colloquium, Physics & Astronomy Department, Rutgers University
- 11/20/2008 “Gravitational Lensing with Stochastic Substructure”
Astrophysics Seminar, Institute for Advanced Study
- 9/29/2008 “Lensing Constraints on Dark Matter Substructure in Galaxies”
Astrophysics/High-Energy Physics Seminar, Physics Department, University of Michigan
- 3/18/2008 “A New Channel for Detecting Dark Matter Substructure in Galaxies”
Seminar, Center of Cosmology and AstroParticle Physics, Ohio State University
- 10/18/2007 “A New Channel for Detecting Dark Matter Substructure in Galaxies”
Cosmology Seminar, Physics Department, UC Davis
- 4/27/2007 “Probing Dark Matter and Gravity with Gravitational Lensing”
Astrophysics & Space Sciences Section, Jet Propulsion Laboratory
- 3/13/2007 “Testing Theories of Gravity with Black Hole Lensing”
Astrophysics Division Colloquium, Goddard Space Flight Center
- 12/4/2006 “Probing Dark Matter and Gravity with Gravitational Lensing”

- Astrophysics Seminar, Physics Department, Duke University
- 10/18/2006 “Testing Theories of Gravity with Black Hole Lensing”
Astronomy Department Colloquium, University of Maryland
- 9/15/2006 “Probing Dark Matter and Gravity with Gravitational Lensing”
Physics Department Colloquium, University of Louisville
- 4/24/2006 “Studying Galactic Substructure with Gravitational Lensing”
Physics Dept. Colloquium, Queens College, City University of New York
- 4/20/2006 “Testing Theories of Gravity with Lensing by Compact Objects”
Astronomy Department Colloquium, Harvard-Smithsonian Center for
Astrophysics
- 3/7/2005 “On Finding Lenses with Anomalous Flux Ratios”
Gravitational Lensing Seminar, Princeton University
- 11/3/2004 “The Importance of Lens Galaxy Environments”
Astronomy Department Colloquium, Columbia University
- 10/27/2004 “Gravitational Lensing and Galactic Substructure”
Theoretical Astrophysics Seminar, University of Illinois at Urbana-
Champaign
- 10/26/2004 “The Importance of Lens Galaxy Environments”
Astronomy Department Colloquium, University of Illinois at Urbana-
Champaign
- 10/21/2004 “Gravitational Lensing and Galactic Substructure”
Physics Department Colloquium, Lehigh University
- 9/28/2004 “Do Lens Galaxies Contain Substructure?”
Joint Tufts/CfA/MIT Cosmology Seminar, Harvard-Smithsonian Center
for Astrophysics
- 9/8/2004 “Do Lens Galaxies Contain Substructure?”
Astrophysics Seminar, University of Pennsylvania

Other Scholarly Presentations

- 10/11/2010 “Lens Galaxy Environments”
Monday Astronomy Research Seminar, Rutgers
- 3/1/2010 “A primer on statistical sampling”

- Monday Astronomy Research Seminar, Rutgers
- 2/3/2010 “Research that Inspires Awe”
Physics & Astronomy Department Showcase, Rutgers
- 6/11/2009 “Gravitational Lensing and the Nature of Dark Matter”
Astrophysics REU program, Rutgers
- 1/6/2009 “LSST Strong Lensing: Galaxies and Their Nuclei Under a Gravitational
Microscope”
Poster presentation, 213th meeting of the American Astronomical Society
- 11/24/2008 “Gravitational Lensing with Stochastic Substructure”
Monday Astronomy Research Seminar, Rutgers
- 11/5/2007 “A New Channel for Detecting Dark Matter Substructure in Galaxies”
Monday Astronomy Research Seminar, Rutgers
- 10/16/2006 “Testing Theories of Gravity with Black Hole Lensing”
Monday Astronomy Research Seminar, Rutgers
- 7/25/2006 “Testing Theories of Gravity with Lensing by Compact Objects”
Eleventh Marcel Grossmann Meeting on General Relativity, Freie
Universitaet, Berlin, Germany
- 3/21/2006 “Gravitational Lensing: Mother Nature's Telescope”
Rutgers Seminar in Physics
- 10/4/2004 “Do Lens Galaxies Contain Substructure?”
Monday Astronomy Research Seminar, Rutgers
- 9/28/2004 “A Lens and a Mirror: Gravitational Lensing and SALT”
Rutgers Seminar in Physics

Outreach Presentations

- 5/7/2012 3rd grade class, James Monroe School, Edison, NJ
- 3/24/2012 Rutgers Alumni Association
New Jersey State Museum, Trenton, NJ
- 3/2/2012 Amateur Astronomers Association of New York, American Museum
of Natural History, New York, NY
- 2/9/2012 Rutgers Astronomical Society

12/14/2011 3rd grade class, James Monroe School, Edison, NJ

10/19/2011 Rutgers University Society of Physics Students

9/24/2011 United Astronomy Clubs of New Jersey, Hope, NJ

5/26/2011 2nd grade class, James Monroe School, Edison, NJ

5/16/2011 Technology High School, Newark, NJ

3/18/2011 2nd grade class, James Monroe School, Edison, NJ

3/17/2011 Concordia Astronomy Club, Concordia, NJ

12/20/2010 2nd grade class, James Monroe School, Edison, NJ

11/12/2010 New Jersey Mensa Society, Iselin, NJ

5/25/2010 1st grade class, James Monroe School, Edison, NJ

10/13/2009 1st grade class, James Monroe School, Edison, NJ

10/8/2009 US Coast Guard Academy, New London, CT

9/3/2009 S*T*A*R Astronomy Club, Lincroft, NJ

6/18/2009 Concordia Astronomy Club, Concordia, NJ

6/2/2009 Kindergarten class, James Monroe School, Edison, NJ

10/10/2008 New Jersey Mensa Society, Iselin, NJ

2/15/2008 Amateur Astronomers, Inc., Union County College, Cranford, NJ

8/25/2007 New Jersey Astronomical Association, High Bridge, NJ

4/21/2007 Bergen Community College, Paramus, NJ

4/18/2007 Rutgers University Society of Physics Students

9/14/2006 Rauch Planetarium, Louisville, KY

3/17/2005 Concordia Astronomy Club, Concordia, NJ

Telescope Observing

(Programs with myself or my students as PI.)

2011: CoI, Gemini Observing Program

“Measuring the Steepness of Substructure Density Profiles with Lensed Broad Line Flux Ratios”

Awarded 3.7 hours of Band 2 queue observing time with the Gemini North 8-meter telescope in Hawaii. The PI is my former graduate student Ross Fadely.

2009: CoI, Gemini Observing Program

“Testing CDM with Substructure Gravitational Lensing”

Awarded 2 nights with the Gemini North 8-meter telescope in Hawaii. The PI is my graduate student Ross Fadely.

2008: CoI, Spitzer Space Telescope Observing Program

“A Spitzer Search for Substructure: Flux Ratios in Unique Lenses”

The telescope time was approved and scheduled for May 15, 2009. Unfortunately, the cryogenic coolant ran out 25 minutes before the observations were to begin, so our program could not be executed. The PI is my graduate student Ross Fadely.

2008: PI, Hubble Space Telescope Observing Program

“Microlensing of the Broad Line Region in the Most Anomalous Lensed Quasar”

Awarded 4 orbits of HST observing time to be scheduled for 2011.

2008: CoI, Gemini Observing Program

“A Gemini Search for Dark Matter Substructure”

Awarded 10.7 hours of queue observing time with the Gemini North 8-meter telescope in Hawaii. The PI is my graduate student Ross Fadely.

2005: PI, Hubble Space Telescope Observing Program

“A Last Look at the First Gravitational Lens”

Awarded 16 orbits of HST observing time.

External Grants

Awarded

2/1/2011-1/31/2013, \$28,354

PI, Hubble Space Telescope Observing Program

“Microlensing of the Broad Line Region in the Most Anomalous Lensed Quasar”

7/1/2008 – 6/30/2013, \$587,257

PI, National Science Foundation CAREER award

“CAREER: A New Frontier in Dark Matter Substructure Studies”

9/1/2007 – 8/31/2010, \$55,613
PI, Hubble Space Telescope Archive/Theory Program
“Galaxy Shapes and Gravitational Lensing”

10/1/2005 – 9/30/2008, \$117,953 (\$93,212 to Rutgers)
PI, Hubble Space Telescope Observing Program
“A Last Look at the First Gravitational Lens”

8/1/2005 – 7/31/2007, \$90,987 (\$38,197 to Rutgers)
PI, Hubble Space Telescope Archive/Theory Program
“The Theory of Multiscale Gravitational Lensing”

Service

Contributions to the academic profession.

2001-present Author of the “gravlens/lensmodel” software package. I have made this software freely available as a service to the community. The software is widely used in both student training and active research. It has been used in approximately 100 research publications by other research groups. I maintain the software, provide extensive documentation, and answer questions from trainees and users.

2004-present Referee for The Astrophysical Journal, The Astronomical Journal, Classical & Quantum Gravity, General Relativity and Gravitation, Il Nuovo Cimento B, Journal of Cosmology and Astroparticle Physics Monthly Notices of the Royal Astronomical Society, New Journal of Physics, and Physical Review D.

2009 Member of the organizing committee for the Tri-State Astronomy Conference (CT/NJ/NY), held Oct. 23, 2009 at the CUNY Graduate Center, New York, NY.

2009 Panelist for peer review of NSF Astronomy & Astrophysics research grants. The six-member panel reviewed 26 grant proposals; I submitted written reviews or panel summaries for 13 of the proposals.

2009 Peer reviewer for the City University of New York's Research Award Program (twice).

2009 Peer assessor for Research Fellowship Competition at St. John's College, Cambridge.

- 2008 Panelist for peer review of NSF Astronomy & Astrophysics research grants. The six-member panel reviewed 20 grant proposals; I submitted written reviews or panel summaries for 10 of the proposals.
- 2008 Peer reviewer for US Department of Energy Dark Energy research grants.
- 2007 Peer reviewer for European Young Investigator Awards program.
- 2004 Panelist for Hubble Space Telescope Time Allocation Committee.
- 2006-present Member of the Scientific Advisory Board for the Petters Research Institute, in Belize.
- 2005-2007 Member of the scientific organizing committee for the German/American Frontiers of Science symposium, offered by the U.S. National Academy of Sciences and the German Alexander von Humboldt Foundation. Each summer, GAFOS brings together strong young scientists from a variety of disciplines to learn about forefront research in eight diverse topics. I was invited as a general participant in 2005, and then invited to join the organizing committee for the 2006 and 2007 symposia.

Contributions to the Department and University

- 2011-present Member of Leadership Committee for the Academic Affairs division of the Office of Undergraduate Education
- 2011 Member of faculty panel to discuss issues raised in the book “Academically Adrift: Limited Learning on College Campuses,” by Richard Arum and Josipka Roksa, hosted by the Office of Undergraduate Education and the Center for Teaching Advancement and Assessment Research.
- 2011 Ad hoc reviewer for Aresty Research Center small grant proposals.
- 2011 Member of campus selection panel for Barry M. Goldwater Scholarship.
- 2010-present Member of the Physical and Mathematical Sciences & Engineering Area Committee for the Graduate School New Brunswick.
- 2010-present Member of interview panels for the Office of Distinguished Fellowships.
- 2010-present Faculty advisor/assessor, Fulbright Campus Evaluation Committee.
- 2010 Department representative for Scarlet Day Plus.
- 2010 Member of the Commencement Speaker Selection Committee.

2010-present Member of Faculty Panels for SAS Honors Program Scholars days.

2009-present Member of the SAS Honors Program Summer Reading Selection Committee.

2009 Session leader, Rutgers University Summer Orientation Program.

2008-present Faculty representative for SAS Honors Program Scholars Days.

2007-present Faculty mentor for SAS Honors Program.

Service on departmental committees.

2011-2012 Ph.D. Oral Exam Committee
Ph.D. Written Exam Committee
Graduate Admissions Committee

2010-2011 Ph.D. Oral Exam Committee
Undergraduate Studies Committee
WWW Committee

2009-2010 Astrophysics Seminar Organizer
Physics Colloquium Committee
Undergraduate Studies Committee

2008-2009 Undergraduate Studies Committee
WWW Committee

2007-2008 Undergraduate Studies Committee
WWW Committee

2006-2007 Undergraduate Studies Committee
Responsibilities Committee

2005-2006 Graduate Recruiting Committee (chair)
Responsibilities Committee
Astronomy Faculty Search Committee

2004-2005 Astrophysics Seminar Organizer
Physics Colloquium Committee
Graduate Recruiting Committee
Astronomy Faculty Search Committee

Contributions to society.

In 2006, my research on gravitational lensing by small black holes and prospects for determining whether space has a fourth dimension received broad media coverage. Articles about the work appeared in MSNBC.com, New Scientist, The San Francisco Chronicle, and many prominent blogs. I was also interviewed for a segment that appeared on American Public Media's radio show *Weekend America*.

I continue to be active in giving public lectures to amateur astronomy clubs and other interested organizations. I learned from and was inspired by such events when I was young, and now I enjoy conveying the excitement of our field to the broader community.

Publications

Citations (from NASA ADS):	all publications	4460 / 158
	refereed publications	3952 / 89
	first-author refereed publications	1374 / 26

Hirsch index: h=39 (all), 38 (refereed)

Refereed Journal Articles: Submitted

[92] I. Momcheva, K. Williams, **C. Keeton**, A. Zabludoff & R. Cool, "A Spectroscopic Survey of the Environments and Lines of Sight of 28 Strong Gravitational Lenses," *The Astrophysical Journal*, submitted

[91] **C. R. Keeton**, "Gravitational lensing with stochastic substructure: Effects of the clump mass function and spatial distribution," *Monthly Notices of the Royal Astronomical Society*, submitted; preprint arXiv:0908.3001

Refereed Journal Articles: Accepted or In Press

[90] K. C. Wong, S. M. Ammons, C. R. Keeton & A. I. Zabludoff, "Optimal Mass Configurations for Lensing High-Redshift Galaxies," *The Astrophysical Journal*, in press; preprint arXiv:1203.2614

Refereed Journal Articles: Published

[89] R. Fadely & **C. R. Keeton**, "Substructure in the lens HE 0435-1223," *Monthly Notices of the Royal Astronomical Society*, 419:936 (2012)

[88] A. B. Aazami, **C. R. Keeton** & A. O. Petters, "Lensing by Kerr Black Holes. II: Analytical Study of Quasi-Equatorial Lensing Observables," *Journal of Mathematical Physics*, 52:102501 (2011)

[87] A. B. Aazami, **C. R. Keeton** & A. O. Petters, "Lensing by Kerr Black Holes. I: General Lens Equation and Magnification Formula," *Journal of Mathematical Physics*, 52:092502 (2011)

[86] **C. R. Keeton**, "On statistical uncertainty in nested sampling," *Monthly Notices of the Royal Astronomical Society*, 414:1418 (2011)

[85] R. Fadely & **C. R. Keeton**, "Near-Infrared K and L' Flux Ratios in Six Lensed Quasars," *The Astronomical Journal*, 141:101 (2011)

- [84] K. C. Wong, **C. R. Keeton**, K. A. Williams, I. G. Momcheva & A. I. Zabludoff, "The Effect of Environment on Shear in Strong Gravitational Lenses," *The Astrophysical Journal*, 726:84 (2011)
- [83] **C. R. Keeton**, "On Modeling Galaxy-Scale Strong Lens Systems," *General Relativity and Gravitation*, 42:2151 (2010)
- [82] R. Fadely, **C. Keeton**, R. Nakajima & G. Bernstein, "Improved Constraints on the Gravitational Lens Q0957+561. II. Strong Lensing," *The Astrophysical Journal*, 711:246 (2010)
- [81] A. B. Congdon, **C. R. Keeton** & C. E. Nordgren, "Identifying Anomalies in Gravitational Lens Time Delays," *The Astrophysical Journal*, 709:552 (2010)
- [80] K. Heng & **C. R. Keeton**, "Planetesimal Disk Microlensing," *The Astrophysical Journal*, 707:621 (2009)
- [79] C. D. Fassnacht, **C. R. Keeton** & D. Khavinson, "Gravitational Lensing by Elliptical Galaxies, and the Schwarz Function," *Analysis and Mathematical Physics*, ed. B. Gustafsson & A. Vasil'ev (Basel: Birkhauser), pp. 115-129 (2009); preprint arXiv:0708:2684
- [78] R. Mandelbaum, G. van de Ven & **C. R. Keeton**, "Galaxy density profiles and shapes -- II. Selection biases in strong lensing surveys", *Monthly Notices of the Royal Astronomical Society*, 398:635 (2009)
- [77] G. van de Ven, R. Mandelbaum & **C. R. Keeton**, "Galaxy density profiles and shapes -- I. Simulation pipeline for lensing by realistic galaxy models," *Monthly Notices of the Royal Astronomical Society*, 398:607 (2009)
- [76] R. Perna & **C. R. Keeton**, "Gravitational Lensing of Anisotropic Sources," *Monthly Notices of the Royal Astronomical Society*, 397:1084 (2009)
- [75] **C. R. Keeton** & L. Moustakas, "A New Channel for Detecting Dark Matter Substructure in Galaxies: Gravitational Lens Time Delays," *The Astrophysical Journal*, 699:1720 (2009)
- [74] R. Nakajima, G. Bernstein, R. Fadely, **C. Keeton** & T. Schrabback, "Improved Constraints on the Gravitational Lens Q0957+561. I. Weak Lensing," *The Astrophysical Journal*, 697:1793 (2009)
- [73] R. E. Ryan Jr., S. H. Cohen, R. A. Windhorst, **C. R. Keeton**, & T. J. Veitch, "Is the Optically Unidentified Radio Source FIRST J121839.7+295325 a Dark Lens?" *The Astrophysical Journal*, 688:43 (2008)
- [72] E. Rozo, D. Nagai, **C. R. Keeton** & A. Kravtsov, "The Impact of Baryonic Cooling

on Giant Arc Abundances,” *The Astrophysical Journal*, 687:22 (2008)

[71] A. B. Congdon, **C. R. Keeton** & C. E. Nordgren, “Analytic Relations for Magnifications and Time Delays in Gravitational Lenses with Fold and Cusp Configurations,” *Monthly Notices of the Royal Astronomical Society*, 389:398 (2008)

[70] G. Dobler, **C. R. Keeton**, A. Bolton & S. Burles, “Lensing Probabilities for Spectroscopically Selected Galaxy-Galaxy Strong Lenses,” *The Astrophysical Journal*, 685:57 (2008)

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