

Curriculum Vitae

Jessica L. Rosenberg

Harvard-Smithsonian Center for Astrophysics
60 Garden Street, MS 65
Cambridge, MA 02138

phone: 617-496-7740
e-mail: jlrosenberg@cfa.harvard.edu
<http://cfa.harvard.edu/~jlrosenberg>

Education

- 2000 **Ph.D. in Astronomy** (2000), University of Massachusetts, Amherst, MA
Dissertation: "Filling the Gap in the Extragalactic Census: A 21 cm and Near-Infrared Study of Galaxies"
Advisor: Stephen Schneider
- 1993 **B.A. in Astronomy and Physics with Honor**, Wesleyan University, Middletown, CT
Thesis: "An Observational Study of the Case Low-Dispersion Northern Sky Survey"
Advisor: John Salzer

Professional Appointments

- 2004 – present **National Science Foundation Astronomy and Astrophysics Postdoctoral Fellow**,
Harvard-Smithsonian Center for Astrophysics, Cambridge, MA
"Studying Star Formation with Local Dwarf Galaxies"
- 2003 – 2004 **National Science Foundation Astronomy and Astrophysics Postdoctoral Fellow**,
University of Colorado, Boulder, CO
"Using Lyman- α Absorbers as Probes of Galaxy Halos"
- 2000 – 2003 **Research Associate**, University of Colorado, Boulder, CO
Lyman- α absorber/galaxy connection
Gas-rich galaxies in the local universe
- 1994 – 2000 **Research Assistant**, University of Massachusetts, Amherst, MA
HI census of galaxies in the local universe
Gas-rich galaxies in the 2-Micron All-Sky Survey (2MASS)
- 1993 – 1995 **Teaching Assistant**, University of Massachusetts, Amherst, MA
Head teaching assistant
Instructor for Observational Astronomy (ASTRO 103)
Lab assistant for undergraduate Radio Astronomy
Teaching assistant for Introductory Astronomy
- 1990 – 1993 **Research Assistant**, Wesleyan University, Middletown, CT
Properties and distribution of emission-line galaxies
HI properties of blue compact dwarf galaxies
Studies of galaxy resonances in spiral galaxies

Honors, Awards, & Grants

- 2004 PI on HST Cycle 13 program awarded 26 orbits, “The Size and Shape of a Spiral Galaxy’s Gaseous Halo” (not completed due to STIS failure)
- 2004 PI on NSF grant “Astronomy and Astrophysics Postdoctoral Fellow’s Symposium”
- 2003 – present NSF Astronomy and Astrophysics Postdoctoral Fellowship
- 2002 Co-PI on Cosmic Origins Spectrograph team grant, “The IGM/Galaxy Connection: The Distribution of Baryons at $z=0$ ”
- 2002 Co-PI on Center for Astrophysics and Space Astronomy grant, “The IGM/Galaxy Connection: The Distribution of Baryons at $z=0$ ”
- 2000 – present Co-I on several successful HST and FUSE programs
- 2001 AAS International Travel Grant
- 2001 Seeing Through the Dust: 50 Years of HI – conference grant
- 1998 Sigma Xi Grant-in-Aid of Research
- 1998 University of Massachusetts Travel Grant
- 1994 Sigma Xi Grant-in-Aid of Research
- 1993 Littel Prize
- 1992 – 1993 Research Education for Undergraduates Grant
- 1992 Ford Foundation Research Grant
- 1991 Keck Foundation Summer Research Fellowship

Professional Service

Referee: for ApJ, AJ, and MNRAS

Co-Organizer: NSF AAPF program symposium session at the 2005 winter AAS

Co-Organizer: The IGM/Galaxy Connection: The Distribution of Baryons at $z=0$, Boulder CO (2002)

Co-Organizer: Extragalactic Journal Club, U. Colorado (2001-2002)

Teaching, Mentoring, and Outreach

- 2004-present **Education research project:** How does confusion affect students’ ability to learn physics?
- 2004-present **Education research project:** How do interactive engagement techniques affect the gender gap in student achievement in physics?
- 2005 **Bok workshop leader:** “Interactive Teaching Methods in Science,” Harvard University
- 2004 **Session leader:** “Peer Instruction: Discussion and Brains-on Demonstration,” AAPT New Faculty Workshop
- 2004 **Instructor:** Introduction to Astronomy, NSF funded curriculum reform class, U. Colorado
- 2004 **Radio Interview:** KUSF “The Static Limit,” “The Galaxies and What Lies Between Them”
- 2003 **Curriculum development:** Science Explorers middle school “galaxies” curriculum, University of Colorado
- 2003-2004 **Workshop leader:** Science Explorers workshops for middle school teachers and students

Teaching, Mentoring, and Outreach continued

- 2002 **Co-supervisor:** graduate student comprehensive exam project, U. Colorado
- 2000 **Teaching Documentation Certificate**, University of Massachusetts
- 1999-2000 **Instructor**, Planetarium shows for school groups, Amherst College planetarium
- 1997-2000 **Scientist pen-pal**, Science-By-Mail program, Boston Museum of Science, Boston, MA

Recent Invited talks and Colloquia

- 2005 **Infrared Observations of Star-Forming Dwarf Galaxies**, invited talk, Extreme Starbursts Near and Far Conference, Lijiang China
- 2005 **Gas, Galaxies, and Star Formation: Low-z Constraints on Galaxy Evolution**, University of Massachusetts colloquium
- 2005 **Interactive Teaching as a Recruitment and Training Tool for K-12 Science Teachers**, invited talk, winter AAS
- 2005 **The Topography of Gas in the Universe**, University of Wyoming colloquium
- 2003 **The Connection Between Galaxies and the Intergalactic Medium**, Boston Univeristy colloquium
- 2003 **Galaxies and what Lies Between Them**, Dean Lecture, Morrison Planetarium, San Fransisco, CA
- 2002 **The Intergalactic Medium/Galaxy Connection**, NRAO Socorro colloquium
- 2001 **Searching the Universe for Invisible Galaxies**, Denver University colloquium
- 2001 **The Topography of HI in the Local Universe**, Australia Telescope National Facility colloquium, Sydney Australia

Refereed Astronomy Publications

The Low- z Intergalactic Medium. II. LyB, OVI, and CIII Forest, Danforth, C. W., Shull, J. M., Rosenberg, J. L., Stocke, J. T. 2005, *ApJ*, submitted.

The Diverse Infrared Properties of Star-Forming Dwarf Galaxies, Rosenberg, J. L., Ashby, M. L. N., Salzer, J. J., Huang, J. -S. 2006, *ApJ*, in press.

The Relationship between Baryons and Dark Matter in Extended Galaxy Halos, Putman, M. E., Rosenberg, J. L., Stocke, J. T., McEntaffer, R. 2005, submitted.

The Arecibo Legacy Fast ALFA Survey: I. Science Goals, Survey Design, and Strategy, Giovanelli, R., Haynes, M.P., Kent, B.R., Perillat, P., Saintonge, A., Brosch, N., Catinella, B., Hoffman, G.L., Stierwalt, S., Spekkens, K., Lerner, M., Masters, K.L., Momjian, E., Rosenberg, J., Springob, C.M. plus 25 others, 2005, *AJ*, in press.

The Arecibo Legacy Fast ALFA Survey: II. Results of Precursor Observations, Giovanelli, R., Haynes, M. P., Kent, B. R., Perillat, P., Catinella, B., Hoffman, G. L., Momjian, E., Rosenberg, J. L., Saintonge, A., Spekkens, K., Stierwalt, S., Brosch, N., Masters, K. L., Springob, C. M., Karachentsev, I. D., Karachentseva, V. E., Koopmann, R. A., Muller, E., van Driel, W., van Zee, L. 2005, *AJ*, submitted.

Infrared Luminous Lyman Break Galaxies: A Population that Bridges LBGs and SCUBA Galaxies, Huang, J. -S., Rigopoulou, D., Willner, S. P., Papovich, C., Shu, C., Ashby, M. L. N., Barnby, P., Bundy, K., Conselice, C., Egami, E., Perez-Gonzalez, P. G., Rosenberg, J. L., Smith, H. A., Wilson, G., Fazio, G. G. 2005, *ApJ*, in press.

Gas and Stars in an HI-Selected Sample, Rosenberg, J. L. & Schneider, S. E., Posson-Brown, J. 2004, *AJ*, submitted.

Discovery of a Dwarf Post-Starburst Galaxy Near a High Column Density Local Ly-alpha Absorber, Stocke, J. T., Keeney, B. A., McLin, K. M., Rosenberg, J. L., Weymann, R. J., & Giroux, M. L. 2003, *ApJ*, 609, 94.

Observations of Abell 4059 with the Chandra X-Ray Telescope, Hubble Space Telescope, and Very Large Array: Unraveling a Complex Cluster/Radio Galaxy Interaction, Choi, Y. -Y., Reynolds, C. S., Heinz, S. Rosenberg, J. L., Perlman, E. S., & Yang, J. 2003, *ApJ*, 606, 185.

Probing the Size of Low-Redshift Lyman- α Absorbers, Rosenberg, J. L., Ganguly, R., Giroux, M., Stocke, J. T. 2003, *ApJ*, 591, 677.

The Contribution of HI-Rich Galaxies to the Damped Absorber Population at $z=0$, Rosenberg, J. L. & Schneider, S. E. 2003, *ApJ*, 606, 185.

An HI Survey of Actively Star-Forming Dwarf Galaxies, Salzer, J. J., Rosenberg, J. L., Weisstein, E. W., Mazzarella, J. M., Bothun, G. D. 2002, *AJ*, 124, 191.

The Arecibo Dual-Beam Survey: The HI Mass Function, Rosenberg, J. L. & Schneider, S. E. 2002, *ApJ*, 568, 1.

The Arecibo Dual-Beam Survey: The Arecibo and VLA Observations, Rosenberg, J. L. & Schneider, S. E. 2000, *ApJS*, 130, 177.

Emission-Line Galaxy Surveys as Probes of the Spatial Distribution of Dwarf Galaxies I: The University of Michigan Survey, Lee, J. C., Salzer, J. J., Law, D. A., & Rosenberg, J. L. 2000, *ApJ*, 536, 606.

Discovery of New Galaxies Veiled by the Milky Way, Jarrett, T., Chester, T., Cutri, R., Hurt, R., Schneider, S. E., Rosenberg, J. L., Huchra, J., & Mader, J. 2000, *AJ*, 120, 298.

A Deep Survey of HI-Selected Galaxies: The HI Mass Function, Schneider, S. E., Spitzak, J. G., & Rosenberg, J. L. 1999, *ApJL*, 507, 9.

Imaging and Spectroscopic Observations of the Case Survey Blue/Emission-Line Galaxies, J. J. Salzer, J. W. Moody, J. L. Rosenberg, S. A. Gregory, and M. V. Newberry, 1995, *AJ*, **109**, 2376.

Emission-Line Galaxies in the Slice of the Universe. II. The Deep Case Survey Sample, 1994, J. L. Rosenberg, J. J. Salzer, J. W. Moody, *AJ*, **108**, 1557.

Astronomy Book Chapters

The IGM/Galaxy Connection: The Distribution of Baryons at $z=0$, Edited by J. L. Rosenberg and M. E. Putman, University of Colorado, Department of Astrophysical and Planetary Sciences, CASA, Boulder, USA. Astrophysics and Space Science Library Volume 281 Kluwer Academic Publishers, Dordrecht.

Astronomical Survey Documents

ALFA Shallow Survey/ZOA White Paper, 2003, Rosenberg, J. L., Henning, P., Putman, M., Davies, J., Brosch, N., Giovanelli, R., Darling, J., Tully, B., Kilborn, V., Bruens, C., Hoffman, L., Pantoja, C.

GALWORKS Performance on the Spiral-Rich Cluster Hercules, 1997, T. H. Jarrett, J. L. Rosenberg, <http://spider.ipac.caltech.edu/staff/jarrett/2mass/3chan/herc/herc.html>.

GALWORKS Ellipse Fitting Results with Simulation Galaxies, 1997, J. L. Rosenberg, T. H. Jarrett, <http://spider.ipac.caltech.edu/staff/jarrett/2mass/ellip/ellip.html>.

GALWORKS Results for Six Scans in SA57: Algorithm 2, 1997, T. H. Jarrett, J. L. Rosenberg, http://spider.ipac.caltech.edu/staff/jarrett/2mass/sa57/sa57_lcsb.html.

GALWORKS Results for Four Scans in SA57: Algorithm 1, 1997, T. H. Jarrett, J. L. Rosenberg, <http://spider.ipac.caltech.edu/staff/jarrett/2mass/sa57/sa57.html>.

Comparison of GALWORKS and IRAF's STSDAS Photometry in a Polar Field, 1997, J. L. Rosenberg, T. H. Jarrett, <http://spider.ipac.caltech.edu/staff/jarrett/2mass/photmem/photmem.html>.

Detection of Low Central Surface Brightness Galaxies with GALWORKS: Analysis of the Coma Field, 1996, J. L. Rosenberg, T. H. Jarrett.

Refereed Interdisciplinary Publications

Peer Instruction: Making Science Engaging, Rosenberg, J. L., Lorenzo, M., Mazur, E. 2008, Handbook of College Science Teaching, NSTA Press, submitted.

Contagion of Aggression in Daycare Classrooms as a Function of Peer and Teacher Responses, Goldstein, N. E., Arnold, D. H., Rosenberg, J. L., Stowe, R. M., Ortiz, C., *Journal of Educational Psychology*, 93, 708.

Selected Unrefereed Publications

GRB 050525a, Infrared Observations, Kaplan, D., Garnavich, P., Rosenberg, J., Stanek, K. Z. 2005, *GCN*, 2507, 1.

GRB 050525, Infrared Observations, Rosenberg, J., Garnavich, P. 2005, *GCN*, 3471, 1.

Interactive Teaching as a Recruitment and Training Tool for K-12 Science Teachers, Rosenberg, J. L. 2004, *BAAS*, 20513204.

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- Infrared Observations of Star-Forming Dwarf Galaxies with Spitzer**, Rosenberg, J. L., Ashby, M. L. N., Salzer, J. J. 2004, *BAAS*, 205.9318.
- Absorbers in the Suburbs: HST Views the Local Ly-alpha Forest**, Stocke, J. T., Shull, J. M., Penton, S. V., Keeney, B. A., Rosenberg, J. L. 2004, *Outskirts of Galaxy Clusters: Intense Life in the Suburbs*, Ed. A. Diaferio, IAU #195, 116.
- Using Course Transformation to Improve Science Learning and Science Teaching**, Rosenberg, J. L. 2004, *BAAS*, 204.8401.
- Local Gaseous Filaments**, Putman, M. E., Rosenberg, J. L., Ryan-Weber, E. V., Stocke, J. T. 2004, *BAAS*, 204.7902.
- A Survey of Ly-beta, OVI, and CIII Absorbers in the Low-Redshift IGM**, Danforth, C. W., Shull, J. M., Rosenberg, J. L. 2003, *BAAS*, 20311308.
- The Contribution of HI-Rich Galaxies to the Damped Lyman-alpha Absorber Population at z=0**, Rosenberg, J. L., Schneider, S. E. 2003, *The IGM/Galaxy Connection: The Distribution of Baryons at z=0*, ASSL Conference Proceedings Vol. 281. Edited by J. L. Rosenberg and M. E. Putman. ISBN: 1-4020-1289-6, Kluwer Academic Publishers, Dordrecht, 2003, p41.
- An HI Study of the Ly α Absorber/Galaxy Connection**, Rosenberg, J. L., Putman, M. E. 2002, ASP proceedings.
- The Contribution of HI-Rich Galaxies to the Damped Absorber Population at z=0**, Rosenberg, J. L. & Schneider, S. E. 2001, *Weymann Symposium Conference Proceedings*.
- Abell 262 and a Large Background Supercluster found in 2MASS**, Schneider, S. E., Skrutskie, M. F., Rosenberg, J. L., Huchra, J. P., Jarrett, T. -H., Chester, T., & Eder, J. A. 2001, *BAAS*, 198.3315.
- The Arecibo Dual-Beam Survey: Filling the Gap in the Extragalactic Census**, Rosenberg, J. L. & Schneider, S. E., 2000, *Mapping the Hidden Universe: The Universe Behind the Milky Way*.
- The Tail of the HI Mass Function**, Schneider, S. E. & Rosenberg, J. L., 2000 *Mapping the Hidden Universe: The Universe Behind the Milky Way* .
- The Arecibo Dual-Beam Survey: A Trove of 21cm Galaxy Detections**, J. L. Rosenberg and S. E. Schneider, 1998 *Bull. American Astron. Soc.*, 192.6601.
- 2MASS and the Tully-Fisher Relation**, J. L. Rosenberg, 1997, *Proceedings of the Third DENIS Euroconference*, Kluwer Publishing.
- Extragalactic Astronomy with 2MASS**, S. E. Schneider, J. L. Rosenberg, T. H. Jarrett, T. J. Chester, and J. P. Huchra, 1997, *Proceedings of the Third DENIS Euroconference*, Kluwer Publishing.
- Mapping molecular emission in the coma of C/1996 B2**, A. J. Lovell, F. P. Schloerb, W. M. Irvine, J. E. Dickens, C. DeVries, M. Heyer, P. Pratap, M. Miralles, C. Brunt, and J. L. Rosenberg, 1996, *ACM 96, Cospar Colloquium 10*, Versailles, France.
- Emission-Line Galaxy Surveys as Probes of the Spatial Distribution of Dwarf Galaxies**, J. J. Salzer, J. L. Rosenberg, 1994, *ESO/OHP Workshop on Dwarf Galaxies*, edited by G. Meylan and P. Prugniel (ESO, Garching bei Munchen), p. 129.
- Observations of Blue/Emission-Line Galaxies from the Case Survey**, J. L. Rosenberg and J. J. Salzer, 1993 *Bull. American Astron. Soc.*, **182**, 31.06.
- Resonances in Barred Spiral Galaxies**, Rosenberg, J. L. 1991, *Proceedings of the 1991 Undergraduate Symposium on Research in Astronomy*, Williams College, Williamstown, MA, 1-2 November, 1991. Edited by Priscilla J. Benson, Jay M. Pasachoff, and Alex K. Wong., p.106.