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Education	Professors for the Future Fellow 2004 – 2005 UNIVERSITY OF CALIFORNIA, DAVIS Training in teaching methods and course design. Design and execute project to enhance graduate/postdoctoral experience.
	Ph.D. Astronomy 2001 CALIFORNIA INSTITUTE OF TECHNOLOGY <i>Thesis Topic</i> : The Northern Sky Optical Cluster Survey <i>Thesis Advisor</i> : Dr. S. George Djorgovski
	B.A. Astrophysics <i>Summa Cum Laude</i> 1994 COLUMBIA UNIVERSITY <i>Rabi Scholar</i>
Employment	Research Assistant Professor 2005 – present UNIVERSITY OF VIRGINIA DEPARTMENT OF ASTRONOMY
	Postdoctoral Scholar 2003 – present UNIVERSITY OF CALIFORNIA, DAVIS DEPARTMENT OF PHYSICS
	Postdoctoral Scholar 2000 – 2003 JOHNS HOPKINS UNIVERSITY DEPT. OF PHYSICS AND ASTRONOMY
	Research Assistant 1994 – 2000 CALIFORNIA INSTITUTE OF TECHNOLOGY ASTRONOMY DEPARTMENT <i>Advisor</i> : S. George Djorgovski
	Teaching Assistant 1994 – 1996 CALIFORNIA INSTITUTE OF TECHNOLOGY ASTRONOMY DEPARTMENT <ul style="list-style-type: none">• Undergraduate courses: introduction to astronomy• Graduate courses: cosmology, interstellar medium
	Research Assistant 1990 – 1994 COLUMBIA UNIVERSITY ASTRONOMY DEPARTMENT <i>Advisor</i> : R. Michael Rich

Research Experience

Clusters and Groups of Galaxies:

- Multi-wavelength imaging and spectroscopic study of the Cl1604 supercluster at $z = 0.9$, one of the most distant known superclusters.
- Participation in the High- z Large Scale Structure Survey, searching for superclusters and filaments around known $z > 0.5$ clusters.
- Weak lensing measurements of mass distribution in the Cl1604 supercluster at $z = 0.9$.
- Creation of the Northern Sky Optical Survey, a catalog of $\sim 20,000$ galaxy clusters over 10,000 square degrees of the northern sky, based on DPOSS data.
- Comparison of X-ray and optically selected cluster samples using NoSOCS and NORAS at $z < 0.2$, and deep pointed data at $z \geq 0.5$.
- Follow-up imaging and multislit spectroscopy to characterize completeness, contamination, and redshift distribution of galaxy clusters detected in NoSOCS.
- Development of an effective photometric redshift estimator for galaxy clusters at $z < 0.4$ from g and r data alone.
- Measurement of galaxy cluster richnesses which are well correlated with mass, allowing the creation of mass-limited subsamples without spectroscopy.
- Survey for Hickson-like compact groups at $z < 0.2$ from DPOSS.
- Examination of the group environments of lens galaxies and their effect on determining H_0 from strong lensing.

Sky Surveys:

- Member of Sloan Digital Sky Survey collaboration. Performed data access testing, documentation and description for public data access.
- Coordination of the DPOSS survey, including processing of ~ 2000 digitized plate scans for DPOSS, maintenance of a ~ 300 Gb database, and survey calibration. Provided oversight and training of numerous undergraduate students to assist in observing and data handling.
- CCD imaging, processing, and analysis of over 500 Abell clusters in the gri bands using Palomar 60-inch data.

Galaxy Properties and Evolution:

- Study of the Butcher-Oemler effect in a large sample of clusters at $z < 0.3$.
- Measuring the morphology-density relationship in a $z = 0.9$ supercluster using HST and ground-based imaging.
- Construction of the fundamental plane in a $z = 0.9$ supercluster using HST imaging and Keck spectroscopy.
- Examining AGN and starburst populations in $z \sim 1$ clusters using optical spectroscopy and radio imaging.
- Study of stellar populations of Wolf-Rayet galaxies via longslit spectroscopy, mid-IR spectroscopy, and $UBVRIH\alpha$ imaging.
- Construction of galaxy number counts in three bands from DPOSS data.
- Multi-fiber spectrographic search for morphologically compact, star-forming galaxies at low redshift.

High-Redshift Universe:

- Detection of large scale structures around known clusters at $z > 0.7$ from deep wide-field imaging.
- Optical and radio searches for QSOs at $z > 4$ in DPOSS.
- Searches for QSO companions/protoclusters at $z > 4$ via narrow-band imaging.

Instrumentation and Observing:

- Utilization of HST, Spitzer, Chandra and XMM data.
- Over 200 nights of single detector and mosaic camera CCD imaging.
- Multislit spectroscopy with COSMIC (Palomar), LRIS and DEIMOS (Keck).
- Wide-field Near-IR imaging with WIRC (Palomar) and FLAMINGOS (KPNO).
- Multi-fiber spectroscopy with NORRIS (Palomar).
- Longslit spectroscopy with Double Spectrograph (Palomar).
- Near-IR imaging with P60 IRCAM (Palomar) and NIRC (Keck).
- Writing documentation for imaging cameras and spectrographs.
- Development of optimal methods for obtaining twilight flatfields.

Local Universe:

- Measurement of velocity dispersions in M31 globular clusters from Keck HIRES spectroscopy.

Other

Tour guide, Palomar Observatory.

Experience

Design of large posters for conferences and museum displays.

Web page design for various organizations.

National, MD, VA and CA Certifications, Firefighter II.

National Registry of Emergency Medical Technicians.

Honors

Professors for the Future Fellow, UC Davis	2004 – 2005
NASA Graduate Student Research Program Award	1998 – 2000
Kingsley Fellowship	1998
National Science Foundation Fellowship	1994 – 1996
Rabi Scholar, Columbia University	1992 – 1994
Dean's List, Columbia University	1990 – 1994

References

Dr. S. George Djorgovski

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Bibliography

Refereed Publications

37. Lubin, L. M., **Gal, R. R.** & Squires, G. K. “*The High Redshift Large Scale Structure Survey,*” 2006, *in prep*
36. **Gal, R. R.**, Lubin, L. M. & Squires, G. K. “*The Discovery of a Rich Cluster of Galaxies at $z = 1.17,$* ” 2006, *in prep*
35. **Gal, R. R.**, Lubin, L. M. & Squires, G. K. “*The Complex Structure of a $z = 0.9$ Supercluster,*” 2006, *in prep*
34. **Gal, R. R.**, de Carvalho, R. R., Lopes, P. A. A., Djorgovski, S. G., Brunner, R. J. & Mahabal, A. A. “*The Northern Sky Optical Cluster Survey III: The Complete Catalog,*” 2006, *in prep*
33. Lopes, P. A. A., de Carvalho, R. R., Capelato, H. V., **Gal, R. R.** et al. “*X-ray Galaxy Clusters in NoSOCS I. Substructure and the Correlation of Optical and X-ray Properties,*” 2006, *submitted*
32. Fassnacht, C. D., **Gal, R. R.**, Lubin, L. M., McKean, J. P., Squires, G. K., & Readhead, A. C. S. “*Mass Along the Line of Sight to the Gravitational Lens B1608+656: Galaxy Groups and Implications for $H_0,$* ” 2006, ApJ, *in press*
31. Bloom, J. S. et al. “*Closing in on a Short-Hard Burst Progenitor: Constraints from Early-Time Optical Imaging and Spectroscopy of a Possible Host Galaxy of GRB 050509b,*” 2006, ApJ, 638, 354
30. de Carvalho, R. R., Gonçalves, T. S., Iovino, A., Kohl-Moreira, J. L., **Gal, R. R.**, & Djorgovski, S. G. “*A Catalog of Distant Compact Groups Using the Digitized Second Palomar Observatory Sky Survey,*” 2005, AJ, 130, 425
29. La Barbera, F., de Carvalho, R. R., **Gal, R. R.**, Busarello, G., Merluzzi, P., Capaccioli, M. & Djorgovski, S. G. “*Color Gradients in Early-Type Galaxies: Dependence on Environment and Redshift,*” 2005, ApJ, 626, L19
28. Strazzullo, V., Paolillo, M., Longo, G., Puddu, E., Djorgovski, S. G., de Carvalho, R. R. & **Gal, R. R.** “*Morphology of low-redshift compact galaxy clusters,*” 2005, MNRAS, 359, 191
27. **Gal, R. R.**, Lubin, L. M., & Squires, G. K. “*Pushing the Boundaries of the Cl 1604 Supercluster at $z \sim 0.9,$* ” 2005, AJ, 129, 1827
26. de Fernandes, I. F., de Carvalho, R. R., Contini, T., & **Gal, R. R.** “*Massive Star Populations in Wolf-Rayet Galaxies,*” 2004, MNRAS, 355, 728
25. **Gal, R. R.**, de Carvalho, R. R., Odewahn, S. C., Djorgovski, S. G., Mahabal, A., Brunner, R. J., & Lopes, P. A. A., “*The Digitized Second Palomar Observatory Sky Survey (DPOSS) II: Photometric Calibration,*” 2004, AJ, 128, 3082
24. Odewahn, S. C., **Gal, R. R.**, de Carvalho, R. R., Djorgovski, S. G., Mahabal, A., Brunner, R. J., & Lopes, P. A. A., “*The Digitized Second Palomar Observatory Sky Survey (DPOSS) III: Star-Galaxy Classification,*” 2004, AJ, 128, 3092

23. Lopes, P. A. A., de Carvalho, R. R., **Gal, R. R.**, Djorgovski, S. G. Odewahn, S. C., Mahabal, A. A., & Brunner, R. J. “*The Northern Sky Optical Cluster Survey IV: An Intermediate Redshift Galaxy Cluster Catalog and the Comparison of Two Detection Algorithms,*” 2004, AJ, 128, 1017
22. Heinis, S, Treyer, M., Arnouts, S., Milliard, B., Donas, J., & **Gal, R. R.** “*The clustering of ultraviolet selected galaxies at $z=0.1$,*” 2004, A&A, 424, L9
21. **Gal, R. R.** & Lubin, L. M., “*Spectroscopic Confirmation of the Cl 1604 Supercluster at $z \sim 0.9$,*” 2004, ApJ, 607, L1
20. Abazajian, K. et al. , “*The Second Data Release of the Sloan Digital Sky Survey,*” 2004, AJ, 128, 502
19. Abazajian, K. et al. , “*The First Data Release of the Sloan Digital Sky Survey,*” 2003, AJ, 126, 2081
18. Brunner, R. J. et al. , “*Peculiar Broad Absorption Line Quasars Found in The Digitized Palomar Observatory Sky Survey,*” 2003, AJ, 126, 53
17. Iovino, A., de Carvalho, R. R., **Gal, R. R.**, Odewahn, S. C., Lopes, P. A. A., Mahabal, A., & Djorgovski, S. G., “*A New Sample of Distant Compact Groups from the Digitized Second Palomar Observatory Sky Survey,*” 2003, AJ, 125, 1660
16. **Gal, R. R.**, de Carvalho, R. R., Lopes, P. A. A., Djorgovski, S. G., Brunner, R. J., Mahabal, A. A. & Odewahn, S. C., “*A The Northern Sky Optical Cluster Survey II: An Objective Cluster Catalog for 5800 Square Degrees,*” 2003, AJ, 125, 2064
15. Puddu, E., De Filippis, E., Longo, G., Andreon, S., & **Gal, R. R.**, “*The multiplicity function of galaxies,*” 2003, A&A, 403, 73
14. Stoughton, C. et al. “*Sloan Digital Sky Survey: Early Data Release,*” 2002, AJ, 123, 485
13. Boattini, A., D’Abramo, G., Forti, G., & **Gal, R.** “*The Arcetri NEO Preccovery Program,*” 2001, A&A, 375, 293
12. Margoniner, V. E., de Carvalho, R. R., **Gal, R. R.**, & Djorgovski, S. G. “*The Butcher-Oemler Effect in 295 Clusters: Strong Redshift Evolution and Cluster Richness Dependence,*” 2001, ApJ, 548, L143
11. Paolillo, M. et al. “*Luminosity function of clusters of galaxies,*” 2001, A&A, 367, 59
10. Puddu, E. et al. “*Photometric validation of a model independent procedure to extract galaxy clusters,*” 2001, A&A, 379, 426
9. Hradecky, V., Jones, C., Donnelly, R. H., Djorgovski, S. G., **Gal, R. R.**, & Odewahn, S. C. “*Mass-to-Light Ratios of Groups and Clusters of Galaxies,*” 2000, ApJ, 543, 521
8. **Gal, R. R.**, de Carvalho, R. R., Brunner, R., Odewahn, S. C. & Djorgovski, S. G. “*The Palomar Abell Cluster Optical Survey. I. Photometric Redshifts for 431 Abell Clusters,*” 2000, AJ, 120, 540
7. **Gal, R. R.**, de Carvalho, R. R., Odewahn, S. C., Djorgovski, S. G., & Margoniner, V. E. “*The Northern Sky Optical Cluster Survey. I. Detection of Galaxy Clusters in DPOSS,*” 2000, AJ, 119, 12

6. Frail, D. A. et al. “*The Radio Afterglow and the Host Galaxy of the X-Ray-rich GRB 981226,*” 1999, ApJ, 525, L81
5. Bloom, J. S. et al. “*The Host Galaxy of GRB 990123,*” 1999, ApJ, 518, L1
4. Kulkarni, S. R. et al. “*The afterglow, redshift and extreme energetics of the gamma-ray burst of 23 January 1999,*” 1999, Nature, 398, 389
3. Djorgovski, S. G. et al. “*The optical counterpart to the gamma-ray burst GRB 970508,*” 1997, Nature, , 387, 876
2. Djorgovski, S. G., **Gal, R. R.**, McCarthy, J. K., Cohen, J. G., de Carvalho, R. R., Meylan, G., Bendinelli, O., & Parmeggiani, G. “*Dynamical Correlations for Globular Clusters in M31,*” 1997, ApJ, 474, L19
1. Tyson, N. D. & **Gal, R. R.** “*An exposure guide for taking twilight flatfields with large format CCDs,*” 1993, AJ, 105, 1206

Conference Proceedings

22. Gal, R. R., Lubin, L. M. & Squires, G. K., “*Going to Extremes: The NEP5281 and Cl0023 Clusters at $z=0.8,$* ” 2006, American Astronomical Society Meeting, 207
21. Lubin, L. M., Gal, R. R. & Squires, G. K., “*The High Redshift Large Scale Structure Survey,*” 2006, American Astronomical Society Meeting, 207
20. Gal, R. R. & Lubin, L. M., “*Exploring the Cl 1604 Supercluster at $z=0.9,$* ” 2005, American Astronomical Society Meeting, 205
19. Lubin, L. M., Gal, R. R., Squires, G. K. & Papenkova, M., “*Latest Results from the High-Redshift Large Scale Structure Survey,*” 2005, American Astronomical Society Meeting, 205
18. Gal, R. R. et al. , “*A New Galaxy Cluster Survey for the Northern Sky,*” 2004, in Clusters of Galaxies, from the Carnegie Observatories Centennial Symposia
17. Gal, R. R. & de Carvalho, R. R., “*The Northern Sky Optical Cluster Survey: Towards the Mass Function,*” 2002, American Astronomical Society Meeting, 201
16. Gal, R. R. et al. , “*20,000 Galaxy Clusters From DPOSS,*” 2002, American Astronomical Society Meeting, 200
15. Djorgovski, S. G. et al. “*The Digital Palomar Observatory Sky Survey (DPOSS): General Description and the First Public Data Release,*” 2001, American Astronomical Society Meeting, 200
14. Iovino, A., de Carvalho, R., Gal, R. R., Odewahn, S., & Djorgovski, S. “*Compact Groups in the DPOSS-II Survey,*” 2001, ASPCS 232, 164
13. Gal, R. R. “*The Northern Sky Optical Cluster Survey,*” 2001, ASPCS 268, 371
12. Djorgovski, S. G., Gal, R. R., Mahabal, A., Brunner, R., Castro, S. M., Odewahn, S. C., de Carvalho, R. R., & DPOSS Team “*Color-Space Outliers in DPOSS: Quasars and Peculiar Objects,*” 2000, American Astronomical Society Meeting 197, #116.07, 197, 111607

11. Gal, R. R., de Carvalho, R. R., Odewahn, S. C., Djorgovski, S. G., & Lopes, P. A. “*The Northern Sky Optical Cluster Survey: Galaxy Clusters from 10,000 Square Degrees in DPOSS,*” 2000, American Astronomical Society Meeting 197, #107.01, 197, 110701
10. Gal, R. R. et al. , “*The Northern Sky Optical Cluster Survey,*” , 2000, in *Mining the Sky*, Banday, A. J., Zaroubi, S. & Bartelmann, M., eds.
9. Lopes, P. A. A., Gal, R. R., Djorgovski, S. G., de Carvalho, R. R., & Odewahn, S. C. “*Optical Substructures in 356 Abell Clusters,*” 2000, American Astronomical Society Meeting 197, #106.11, 197, 110611
8. Castro, S., Djorgovski, S. G., Brunner, R., Mahabal, A., Gal, R. R., de Carvalho, R. R., & DPOSS Team “*Evolution of High Column Density Absorbers in Spectra of QSO at $z \approx 4$ Selected from DPOSS,*” 2000, American Astronomical Society Meeting 197, #03.10, 197, 0310
7. Brunner, R. J., Djorgovski, S. G., Gal, R. R., & Odewahn, S. C. “*Exploring the Multi-Wavelength, Low Surface Brightness Universe,*” 1999, American Astronomical Society Meeting 195, #80.01, 195, 8001
6. Djorgovski, S. G., Brunner, R., Harrison, F., Gal, R. R., Odewahn, S., de Carvalho, R. R., Mahabal, A., & Castro, S. “*Discovery of a Possible Population of Type 2 Quasars in DPOSS,*” 1999, American Astronomical Society Meeting 195, #65.02, 195, 6502
5. Djorgovski, S. G., Odewahn, S. C., Gal, R. R., Brunner, R., de Carvalho, R. R., Longo, G., & Scaramella, R. “*The Status of DPOSS, and Some Initial Scientific Applications,*” 1999, American Astronomical Society Meeting 194, #04.14, 194, 0414
4. Odewahn, S. C., Djorgovski, S. G., Brunner, R., Gal, R. R., & de Carvalho, R. R. “*Galaxy Number Counts in 1000 sq.deg. of the Digital Palomar Observatory Sky Survey (DPOSS),*” 1999, American Astronomical Society Meeting 194, #04.13, 194, 0413
3. Gal, R. R., Odewahn, S. C., Djorgovski, S. G., Brunner, R. J., & de Carvalho, R. R. “*Photometric Redshifts for DPOSS Galaxy Clusters at $z < 0.4$,*” 1999, Photometric Redshifts and the Detection of High Redshift Galaxies, ASP Conference Series, Vol. 191, Weymann, R., Storrie-Lombardi, L., Sawicki, M. & Brunner, R., eds.
2. Djorgovski, S. G., Gal, R. R., Odewahn, S. C., de Carvalho, R. R., Brunner, R., Longo, G., & Scaramella, R. “*The Palomar Digital Sky Survey (DPOSS),*” 1998, Wide Field Surveys in Cosmology, 14th IAP meeting held May 26-30, 1998, Paris. Publisher: Editions Frontieres. ISBN: 2-8 6332-241-9, p. 89., 89
1. Gal, R. & Djorgovski, S. G. “*The Possible Redshift Clumping of Damped Lyman-alpha Absorbers,*” 1997, ASP Conf. Ser. 114: Young Galaxies and QSO Absorption-Line Systems, 79

Invited Talks & Lectures

Optical Detection & Properties of Galaxy Clusters,

Guillermo Haro Advanced Summer School: A Pan-Chromatic View of Clusters of Galaxies and the Large-Scale Structure, Mexico, 2005

Galaxies Like to Live Together,

What Physicists Do series, Sonoma State, 2004

Galaxy Clusters From DPOSS,
Tracing Cosmic Evolution with Galaxy Clusters, Marseilles, 2001

The Northern Sky Optical Cluster Survey,
Mapping the Sky, MPE-Garching, 2000

The Northern Sky Optical Cluster Survey,
Observatório Nacional, Brazil, 1999

Grants & Telescope Time Allocations 1995-present

Infrared

S. G. Djorgovski, M. Pahre, **R. R. Gal**, K. Banas, *Protogalaxies*, Keck 10-m : 2 nights NIRC (1997)

S. G. Djorgovski, A. Readhead, K. Banas, R. de Carvalho, **R. R. Gal**, *Is There a Missing Population of Dust-Obscured Quasars?*, Palomar 60-in : 4 nights IRCAM (1997)

S. G. Djorgovski, K. Banas, R. de Carvalho, **R. R. Gal**, *Infrared Photometry of $z \approx 4$ Quasars*, Palomar 60-in : 2 nights IRCAM (1997)

G. K. Squires, L. M. Lubin, **R. R. Gal**, L. Yan, M. Lacy, *Building a Supercluster: The Cl1604 Supercluster at $z=0.9$* , Palomar 200-in : 2 nights WIRC (2006)

R. R. Gal, L. M. Lubin, G. K. Squires, L. Yan *The Stellar Content of the Cl1604 Supercluster at $z=0.9$* , KPNO 4-m : 3 nights FLAMINGOS (2006)

Optical

S. G. Djorgovski, M. Pahre, **R. R. Gal**, K. Banas, *Protogalaxies*. Keck 10-m : 3 nights (1997)

S. G. Djorgovski, K. Banas, R. de Carvalho, **R. R. Gal**, *Optical Photometry of $z \approx 4$ Quasars*, Palomar 60-in : 2 nights (1997)

S. C. Odewahn, **R. R. Gal**, S. G. Djorgovski, *A Systematic Survey for Compact Extragalactic Objects*, Palomar 200-in : 4 nights (1998-1999)

R. R. Gal, S. G. Djorgovski, R. de Carvalho, *Imaging of DPOSS Cluster Candidates*, Palomar 60-in : 60 nights (1996-2000)

R. R. Gal, S. G. Djorgovski, R. de Carvalho, *Spectroscopy of DPOSS Cluster Candidates*, Palomar 200-in : 28 nights (1996-2000)

S. G. Djorgovski, **R. R. Gal**, R. de Carvalho, *Calibration of DPOSS*, Palomar 60-in : 150 nights (1995-2000)

S. G. Djorgovski, S. C. Odewahn, **R. R. Gal**, *Direct Identification of Damped Ly- α Galaxies*, Keck 10-m : 2 nights (1998)

R. de Carvalho, **R. R. Gal**, D. Frayer, *Spectroscopy of Wolf-Rayet Galaxies*, Palomar 200-in : 2 nights (1999)

R. de Carvalho, **R. R. Gal**, D. Frayer, *UBVRIH α Imaging of Wolf-Rayet Galaxies*, Palomar 60-in : 5 nights (1999)

S. C. Odewahn, **R. R. Gal**, *The Comoving Bar Formation Rate: Clues to Disk Galaxy Evolution?*, Keck 10-m : 1 night (1999)

S. G. Djorgovski, **R. R. Gal**, S. C. Odewahn, R. Brunner *Quasar-Marked Protoclusters at $z > 4$* , Keck 10-m : 8 nights (1998-2000)

R. Brunner, S. C. Odewahn, **R. R. Gal**, *An Old cD Galaxy and Associated Cluster at $z=2.05$* , Keck 10-m : 2 nights (1999)

L. M. Lubin, **R. R. Gal**, R. Brunner, P. M. Ricker, *Large Scale Structure at $z = 0.9$* , Keck 10-m : 4.5 nights (2003-2005)

L. M. Lubin, **R. R. Gal**, G. Squires, I. Gioia, C. Mullis, *High-Redshift Clusters from the ROSAT North Ecliptic Pole Survey*, Keck 10-m : 5 nights (2004-2006)

G. Squires, L. M. Lubin, **R. R. Gal**, R. Brunner, P. M. Ricker, *A Systematic Search for Large Scale Structure at $z > 0.5$* , Palomar 200-in : 11 nights (2004-2006)

L. M. Lubin, **R. R. Gal**, J. S. Mulchaey, *Galaxy Evolution in Moderate-Redshift, X-ray-Selected Groups*, Keck 10-m : 2.5 nights (2004-2006)

R. R. Gal, R. de Carvalho & C. D. Fassnacht, *A Spectroscopic Survey of $z \sim 0.2$ Compact Groups*, Lick 3-m : 16 nights (2005-2006)

L. M. Lubin, **R. R. Gal**, G. K. Squires, *The High Redshift Large Scale Structure Survey*, Keck 10-m : 4.5 nights (2005-2006)

Space-Based

S. G. Djorgovski, S. Castro, P. Côté, **R. R. Gal**, A. Mahabal, G. Meylan & R. Rich, *Dynamical Correlations for Globular Clusters in the Local Group Galaxies: Clues About Their Formation*, HST: Cycle 8 Archival

L. M. Lubin, **R. R. Gal** & J. S. Mulchaey, *A Detailed X-ray Study of a Supercluster at $z \sim 0.9$* , XMM: AO-4

R. R. Gal, I. F. de Fernandes, A. Garcia-Rissmann & R. R. de Carvalho, *Gas, Dust and Star Formation in Wolf-Rayet Galaxies*, Spitzer: Cycle 2 Archival (PI, \$66,835)

L. M. Lubin, **R. R. Gal**, J. S. Mulchaey, J. P. McKean & C. D. Fassnacht, *The Active Galaxy Population in a Supercluster at $z \sim 0.9$* , Chandra: Cycle 7 (VLA joint proposal)

L. M. Lubin, **R. R. Gal** & J. S. Mulchaey, *A Detailed Study of an Optically-Selected, High-Redshift Cluster of Galaxies: Anatomy of a Merger*, XMM: AO-5

R. R. Gal, L. M. Lubin, J. S. Mulchaey & G. K. Squires, *Cl0023: A Cluster in Formation at $z=0.84$* , HST: Cycle 15 (proposed)

L. M. Lubin, **R. R. Gal**, G. K. Squires, L. Yan & M. Lacy, *Mixing It Up: Stars, Gas, AGN and Starbirth in a Supercluster at $z=0.9$* , Spitzer: Cycle 3 (proposed)