

Curriculum Vitae

Carlton Pryor

Department of Physics and Astronomy
136 Frelinghuysen Road
Rutgers, The State Univ. of New Jersey
Piscataway, NJ
08854-8019
732-445-5462

Home:

18 Hershey Road
East Brunswick, NJ
08816
732-254-3523

Date of Birth:

April 12, 1954

Education:

B. S. with honors, 1977, California Institute of Technology, Major in Astronomy
M. A., 1979, Harvard University, Department of Astronomy
Ph. D., November 1982, Harvard University, Department of Astronomy

Positions:

Professor, Rutgers University, 2004–
Associate Professor, Rutgers University, 1994–2004
Assistant Professor, Rutgers University, 1988–1994
Assistant Professor, Vanderbilt University, 1986–1987
Post-doctoral Fellow, University of Victoria, 1983–1986
Research/Teaching Assistant, University of Michigan, 1982–1983

Fellowships:

Henry Rutgers Research Fellowship, 1988-1989
NSF Graduate Fellowship, 1977-1980

Professional Organizations:

American Astronomical Society
International Astronomical Union
Astronomical Society of the Pacific

Thesis:

Studies of the Structure and Evolution of Dissipationless Gravitating Systems
Thesis Advisor: M. Lecar

Students Supervised:

Joseph Zajac, Vanderbilt Univ., 1987, M.S., “Photometry of 3,160 Stars Near the
Globular Clusters M12 and M3”
Paul Papenhausen, Rutgers, 1994, Ph.D., “The Search for Mass Segregation in Star
Clusters of the Magellanic Clouds”

- Slawomir Piatek, Rutgers, 1994, Ph.D., “Mass-to-Light Ratios in Dwarf Spheroidal Galaxies and Globular Clusters”
- Karl Gebhardt, Rutgers, 1994, Ph.D., “Dynamics of Globular Clusters”
- Roy Jones, Rutgers, 1995, Ph.D., “Maximum Likelihood Techniques and Completeness Corrections Applied To the Study Of Galactic Globular Clusters”
- Bingrong Xie, Rutgers, 2003, Ph.D., “Studies of the Central Regions in Globular Clusters: Kinematics, Mass Modeling, and a Search for Binary Stars”

Publications

1. “Proper Motions of the LMC and SMC: Reanalysis of *Hubble Space Telescope* Data,” S. Piatek, C. Pryor, and E. W. Olszewski, 2007, *AJ*, in press.
2. “Proper Motions of Dwarf Spheroidal Galaxies from *Hubble Space Telescope* Imaging. V. Final Measurement for Fornax,” S. Piatek, C. Pryor, P. Bristow, E. W. Olszewski, H. C. Harris, M. Mateo, D. Minniti, and C. G. Tinney, 2007, *AJ*, 133, 818–844
3. “Hubble Space Telescope Proper Motions and Stellar Dynamics in the Core of the Globular Cluster 47 Tucanae,” D. E. McLaughlin, J. Anderson, G. Meylan, K. Gebhardt, C. Pryor, D. Minniti, and S. Phinney, 2006, *ApJS*, 166, 249–297.
4. “Proper Motions of Dwarf Spheroidal Galaxies from *Hubble Space Telescope* Imaging. IV. Measurement for Sculptor,” S. Piatek, C. Pryor, P. Bristow, E. W. Olszewski, H. C. Harris, M. Mateo, D. Minniti, and C. G. Tinney, 2006, *AJ*, 131, 1445-1460.
5. “Proper Motions of Dwarf Spheroidal Galaxies from *Hubble Space Telescope* Imaging. III. Measurement for Ursa Minor,” S. Piatek, C. Pryor, P. Bristow, E. W. Olszewski, H. C. Harris, M. Mateo, D. Minniti, and C. G. Tinney, 2005, *AJ*, 130, 95-115.
6. “Erratum: Proper Motions of Dwarf Spheroidal Galaxies from *Hubble Space Telescope* Imaging. II. Measurements for Carina,” S. Piatek, C. Pryor, E. W. Olszewski, H. C. Harris, M. Mateo, D. Minniti, and C. G. Tinney, 2004, *AJ*, 128, 951.
7. “Proper Motions of Dwarf Spheroidal Galaxies from *Hubble Space Telescope* Imaging. II. Measurements for Carina,” S. Piatek, C. Pryor, E. W. Olszewski, H. C. Harris, M. Mateo, D. Minniti, and C. G. Tinney, 2003, *AJ*, 126, 2346-2361.
8. “Addendum: Hubble Space Telescope Evidence for an Intermediate-Mass Black Hole in the Globular Cluster M15. II. Kinematic Analysis and Dynamical Modeling,” J. Gerssen, R. P. van der Marel, K. Gebhardt, P. Guhathakurta, R. Peterson, and C. Pryor, 2003, *AJ*, 125, 376-377.

9. “Proper Motions of Dwarf Spheroidal Galaxies from *Hubble Space Telescope* Imaging. I. Method and a Preliminary Measurement for Fornax,” S. Piatek, C. Pryor, E. W. Olszewski, H. C. Harris, M. Mateo, D. Minniti, D. G. Monet, H. Morrison, and C. G. Tinney, 2002, *AJ*, 124, 3198–3221.
10. “Hubble Space Telescope Evidence for an Intermediate-Mass Black Hole in the Globular Cluster M15. II. Kinematic Analysis and Dynamical Modeling,” J. Gerssen, R. P. van der Marel, K. Gebhardt, P. Guhathakurta, R. Peterson, and C. Pryor, 2002, *AJ*, 124, 3270–3288.
11. “Structure of the Draco Dwarf Spheroidal Galaxy,” S. Piatek, C. Pryor, T. E. Armandroff, and E. W. Olszewski, 2002, *AJ*, 124, 2511–2524.
12. “Stars of the Draco Dwarf Spheroidal Galaxy Beyond Its Measured Tidal Boundary,” S. Piatek, C. Pryor, T. E. Armandroff, and E. W. Olszewski, 2001, *AJ*, 121, 841–860.
13. “Canada-France-Hawaii Telescope Adaptive Optics Observations of the Central Kinematics in M15,” K. Gebhardt, C. Pryor, R. D. O’Connell, T. B. Williams, and J. E. Hesser, 2000, *A.J.*, 119, 1268–1281.
14. “Hubble Space Telescope Photometry of the Globular Cluster M4,” R. A. Ibata, H. B. Richer, G. G. Fahlman, M. Bolte, H. E. Bond, J. E. Hesser, C. Pryor, and P. B. Stetson, 1999, *ApJS*, 120, 265–275.
15. “Mass Segregation in Young Large Magellanic Cloud Clusters. I. NGC 2157,” P. Fischer, C. Pryor, S. Murray, M. Mateo, and T. Richtler, 1998 *A.J.*, 115, 592–604.
16. “White Dwarfs in Globular Clusters: Hubble Space Telescope Observations of M4,” H.B. Richer, G.G. Fahlman, R.A. Ibata, C. Pryor, R.A. Bell, M. Bolte, H.E. Bond, W.E. Harris, J.E. Hesser, S. Holland, N. Ivanans, G. Mandushev, P.B. Stetson, and M.A. Wood, 1997, *Ap.J.*, 484, 741–760.
17. “Fabry-Perot Observations of Globular Clusters. III. M15”, K. Gebhardt, C. Pryor, T. B. Williams, J. E. Hesser, and P. B. Stetson, 1997, *A.J.*, 113, 1026–1038.
18. “An Unusual Brightening of the Eclipsing Binary Star AKO 9 in the Globular Cluster 47 Tucanae Observed with the Hubble Space Telescope”, D. Minniti, G. Meylan, C. Pryor, E. S. Phinney, B. Sams, and C. G. Tinney, 1997, *Ap.J. Lett.*, 474, L27–30.
19. “Spectroscopic Binaries in Globular Clusters. II. A Search for Long-Period Binaries in M22”, P. Cote, C. Pryor, R. D. McClure, J. M. Fletcher, and J. E. Hesser, 1996, *A.J.*, 112, 574–589.

20. “Searches for Binary Stars in Globular Clusters”, C. Pryor, J. M. Fletcher, J. E. Hesser, R. D. McClure, P. B. Stetson, H. B. Richer, G. G. Fahlman, R. A. Ibata, N. C. Ivanans, G. Mandushev, R. A. Bell, M. Bolte, H. E. Bond, W. E. Harris, D. A. VandenBerg, and M. A. Wood, 1996, in *Dynamical Evolution of Star Clusters – Confrontation of Theory and Observation*, IAU Symp. 174, edited by P. Hut and J. Makino, (Kluwer, Dordrecht), p. 193–202.
21. “Age Gradient and the Second Parameter Problem in the Galactic Halo”, H.B. Richer, W.E Harris, G.G. Fahlman, R.A. Bell, H.E. Bond, J.E. Hesser, S. Holland, C. Pryor, P.B. Stetson, D.A. VandenBerg, and S. van den Bergh, 1996, *Ap.J.*, 463, 602–608.
22. “Models of Dwarf Galaxy Destruction”, C. Pryor, 1996, in *Formation of the Galactic Halo . . . Inside and Out*, ASP Conf. Series Vol. 92, edited by H. Morrison and A. Sarjedin, (ASP, San Francisco), p. 424–433.
23. “The Mass-To-Light Ratios of the Draco and Ursa Minor Dwarf Spheroidal Galaxies. II. The Binary Population and Its Effect On the Measured Velocity Dispersions of Dwarf Spheroidals”, E. W. Olszewski, C. Pryor, and T. E. Armandroff, 1996, *A.J.*, 111, 750–767.
24. “The Mass-To-Light Ratios of the Draco and Ursa Minor Dwarf Spheroidal Galaxies. I. Radial Velocities From Multifiber Spectroscopy”, T. E. Armandroff, E. W. Olszewski, and C. Pryor, 1995, *A.J.*, 110, 2131–2165.
25. “Fabry–Perot Observations of Globular Clusters II: 47 Tuc, NGC 6397, and M30”, K. Gebhardt, C. Pryor, T. B. Williams, and J. E. Hesser, 1995, *A.J.*, 110, 1699–1711.
26. “Hubble Space Telescope Observations Of White Dwarfs In the Globular Cluster M4”, H.B. Richer, G.G. Fahlman, R.A. Ibata, P.B. Stetson, R.A. Bell, M. Bolte, H.E. Bond, W.E. Harris, J.E. Hesser, G. Mandushev, C. Pryor, and D.A. VandenBerg, 1995, *Ap.J. Letters*, 451, p. L17–L20.
27. “The Velocity Dispersions Of the Draco and Ursa Minor Dwarf Spheroidal Galaxies”, C. Pryor, E.W. Olszewski, and T. E. Armandroff, 1995, in *Stellar Populations*, IAU Symp. 164, edited by P. C. van der Kruit and G. Gilmore (Kluwer, Dordrecht), p. 418–419.
28. “The Effect of Galactic Tides On the Apparent Mass-To-Light Ratios in Dwarf Spheroidal Galaxies”, S. Piatek and C. Pryor, 1995, *A.J.*, 109, p. 1071–1085.
29. “What Stellar Velocities Can Tell Us About Dark Matter In Local Group Dwarf Spheroidals”, Pryor, C. 1992, In *Dwarf Galaxies*, ESO Conference and Workshop Proceedings No. 49, edited by G. Meylan and P. Prugniel (ESO, Garching), p. 323–334.

30. “Can Galactic Tides Inflate the Apparent M/L’s of Dwarf Spheroidals?”, S. Piatek and C. Pryor, 1992, In Dwarf Galaxies, ESO Conference and Workshop Proceedings No. 49, edited by G. Meylan and P. Prugniel (ESO, Garching), p. 397–400.
31. “Fabry-Perot Measurements of the Dynamics of Globular Cluster Cores: M15 (NGC 7078)”, K. Gebhardt, C. Pryor, T.B. Williams, and J.E. Hesser, 1994, A.J., 107, p. 2067–2076.
32. “Mass-to-Light Ratios for Globular Clusters. III M107 (NGC 6171; GC1629–129)”, S. Piatek, C. Pryor, R. D. McClure, J. M. Fletcher, and J. E. Hesser, 1994, A.J., 107, 1397–1407.
33. “Observational Constraints On the Internal Dynamics of Globular Clusters”, G. Meylan and C. Pryor, 1993, In The Structure and Dynamics of Globular Clusters, ASP Conference Series Vol. 50, edited by S. G. Djorgovski and G. Meylan , p. 31–63.
34. “Velocity Dispersions For Galactic Globular Clusters”, C. Pryor and G. Meylan, 1993, In The Structure and Dynamics of Globular Clusters, ASP Conference Series Vol. 50, edited by S. G. Djorgovski and G. Meylan (ASP, San Francisco), p. 357–371.
35. “The Inner Velocity Structure of M15 Measured With a Fabry-Perot”, K. Gebhardt, C. Pryor, T. B. Williams, and J. E. Hesser, 1993, In The Structure and Dynamics of Globular Clusters, ASP Conference Series Vol. 50, edited by S. G. Djorgovski and G. Meylan (ASP, San Francisco), p. 77–78.
36. “The Velocity Dispersion Of the Distant Halo Globular Cluster NGC 2419”, E. W. Olszewski, C. Pryor, and R. A. Schommer, 1993, In The Globular Cluster–Galaxy Connection, ASP Conference Series Vol. 48, edited by G. H. Smith and J. P. Brodie (ASP, San Francisco), p. 99–103.
37. “The Carina Dwarf Spheroidal Galaxy: How Dark Is It?”, M. Mateo, E. W. Olszewski, C. Pryor, D. L. Welch, and P. Fischer, 1993, A.J., 105, 510–526.
38. “Binary Stars in Globular Clusters”, P. Hut, S. McMillan, J. Goodman, M. Mateo, E. S. Phinney, C. Pryor, H. B. Richer, F. Verbunt, and M. Weinberg, 1992, P.A.S.P., 104, 981–1034.
39. “Dark Matter in Dwarf Galaxies”, C. Pryor, 1992, in Morphological and Physical Classification of Galaxies, edited by G. Longo et al., p. 163–178.
40. “Mass-to-Light Ratios for Globular Clusters. II. The Low-Concentration Clusters NGC 288, NGC 5466, and M55 (NGC 6809)”, C. Pryor, R. D. McClure, J. M. Fletcher, and J. E. Hesser, 1991, A.J., 102, 1026–1042.
41. “The Dark Matter Halos of Draco and Ursa Minor”, C. Pryor and J. Kormendy, 1990, A.J., 100, 127–140.

42. “Mass-to-Light Ratios for Globular Clusters. I. The Centrally Concentrated Clusters NGC 6624, M28 (NGC 6626), and M70 (NGC 6681)”, C. Pryor, R. D. McClure, J. M. Fletcher, and J. E. Hesser, 1989, *A.J.*, 98, 596–610.
43. “The Frequency of Primordial Binary Stars In Globular Clusters”, C. Pryor, R. D. McClure, J. M. Fletcher, and J. E. Hesser, 1989, in *Dynamics of Dense Stellar Systems*, edited by D. Merritt, p.175–181.
44. “A Search for Spectroscopic Binaries in the Globular Cluster M3”, C. P. Pryor, D. W. Latham, and M. L. Hazen, 1988, *A.J.*, 96, 123–138.
45. “Detecting Thermal Neutrinos From Supernovae With DUMAND”, C. Pryor, C. E. Roos, and M. S. Webster, 1988, *Ap.J.*, 329, 335–338.
46. “A Survey of Globular Cluster Velocity Dispersions”, C. Pryor, R. D. McClure, J. M. Fletcher, and J. E. Hesser, 1988, in *Globular Cluster Systems in Galaxies*, IAU Symposium 126, edited by J. Grindlay and A. G. D. Philip, 661–662.
47. “Effects of Mass Segregation on Globular Cluster Main Sequence Luminosity Functions”, C. Pryor, G. H. Smith, and R. D. McClure, 1986, *A.J.*, 92, 1358–1363.
48. “Dynamics of the Globular Cluster M2”, C. Pryor, R. D. McClure, J. M. Fletcher, F. D. A. Hartwick, and J. Kormendy, 1986, *A.J.*, 91, 546–556.
49. “The Discovery of a Spectroscopic Binary in M3”, D. W. Latham, M. L. Hazen-Liller, and C. P. Pryor, 1985, in *Stellar Radial Velocities*, IAU Colloquium 88, edited by A. Philip and D. Latham (L. Davis Press, Schenectady) p. 269–272.
50. “An Extension of the Search for Spectroscopic Binaries in M3”, C. P. Pryor, D. W. Latham, and M. L. Hazen-Liller, 1985, in *Dynamics of Star Clusters*, IAU Symposium 113, edited by J. Goodman and P. Hut (Reidel, Dordrecht) p. 99–101.
51. “Constraints on the Anisotropy of the Velocity Dispersion of the Coma Cluster”, C. Pryor and M. J. Geller, 1984, *Ap.J.*, 278, 457–467.
52. “Can Secondary Infall Produce Flat Rotation Curves?”, C. Pryor and M. Lecar, 1983, *Ap.J.*, 269, 513–530.
53. “The Formation of Galaxies from Massive Neutrinos”, M. Davis, M. Lecar, C. Pryor, and E. Witten, 1981, *Ap.J.*, 250, 423–431.
54. “Late Core Collapse in Gravitating Systems”, L. Nicolaci Da Costa and C. Pryor, 1979, *Ap.J.*, 233, 694–703.