

## Cumulative Bio–Bibliography

University of California, Santa Cruz, CA

January 2006

### **Sandra M. Faber**

Astronomer/Professor of Astronomy and Astrophysics  
University of California Observatories/Lick Observatory

## **ACADEMIC HISTORY**

1966 B.A. in Physics (High Honors), Swarthmore College  
1972 Ph.D. in Astronomy, Harvard University

## **POSITIONS HELD**

1972–1977 Assistant Professor/Assistant Astronomer  
Lick Observatory, University of California, Santa Cruz  
1977–1979 Associate Professor/Associate Astronomer  
Lick Observatory, University of California, Santa Cruz  
1979– Professor/Astronomer  
Lick Observatory, University of California, Santa Cruz  
1996– University Professor, University of California

## **SABBATICAL LEAVE**

1983–1984 Sabbatical leave in residence, University of California, Santa Cruz  
1990–1991 On leave at Bowie State University, Bowie, MD, and Johns Hopkins  
University, Baltimore, MD, serving with the Wide-Field Camera Team,  
*Hubble Space Telescope*  
1997 Sabbatical leave in residence, University of California, Santa Cruz  
(7/01/97–10/31/97)  
1999–2000 Sabbatical leave in residence, University of California, Santa Cruz  
(10/01/99–03/31/00)  
2004 Sabbatical leave in residence, University of California, Santa Cruz  
(10/01/04–12/31/04)  
2005 Sabbatical leave, Miller Visiting Professor, University of California, Berkeley  
(01/01/05–06/30/05)

## **HONORS AND AWARDS**

1964 Phi Beta Kappa Prize, Swarthmore College  
1966 Elected to Sigma Xi  
1966 Elected to Phi Beta Kappa

- 1966–1971 National Science Foundation Graduate Fellow  
1966–1971 Woodrow Wilson Graduate Fellow (declined)  
1971 Carnegie Institution Pre-Doctoral Fellow  
1977–1981 Alfred P. Sloan Foundation Fellow  
1978 Bart J. Bok Prize, Harvard University  
1982 Phillips Visitor, Haverford College  
1984 *Science Digest* 100 Best American Scientists under 40  
1985 Elected to National Academy of Sciences  
1986 Heineman Prize, American Astronomical Society  
1986 Honorary D.Sc., Swarthmore College  
1986 Director’s Distinguished Lecturer, Lawrence Livermore Laboratory  
1987 Tetelman Fellow, Yale University  
1987 Carnegie Lecturer, Carnegie Institution of Washington  
1989 Elected to American Academy of Arts and Sciences  
1990 Feshbach Lecturer, Physics Department, Massachusetts Institute of Technology  
1990 Faculty Research Lecturer, University of California, Santa Cruz  
1991 Darwin Lecturer, Royal Astronomical Society  
1992 Marker Lecturer, Astronomy Department, Pennsylvania State University  
1992 Bunyan Lecturer, Physics Department, Stanford University  
1992 Tomkins Lecturer, Department of Biochemistry, University of California, San Francisco  
1993 NASA Group Achievement Award, Wide-Field/Planetary Camera Team  
1994 Mohler Lecturer, Physics Department, University of Michigan  
1996 University Professor, University of California  
1997 Antoinette de Vaucouleurs Medal, University of Texas  
1997– Fellow, California Council on Science and Technology  
1997 Delphus Lecturer, University of California, Santa Cruz  
1997 Commencement Speaker, UCLA Natural Sciences Commencement  
1997 Honorary D.Sc., Williams College  
1998 Elected to California Academy of Sciences  
1999 Millenium Lecturer, Hebrew University of Jerusalem  
1999 Outstanding Faculty Award, Division of Natural Sciences, University of California, Santa Cruz  
2001 Elected to American Philosophical Society  
2003 *Discover* Magazine: 50 Best American Women Scientists  
2003 Fellow, Institute for Advanced Studies, Hebrew University of Jerusalem  
2004 Cecilia Payne-Gaposchkin Lecturer, Harvard College Observatory, Harvard University  
2004 Halley Lecturer, Astronomy Department, Oxford University  
2004 Nova Colloquium Speaker, Leiden University, Groningen University, the Netherlands  
2005 Miller Visiting Professor, University of California, Berkeley  
2005 Sackler Lecturer, Department of Physics, Princeton University  
2005 Médaille de l’Institute d’Astrophysique de Paris  
2006 Centennial Medal of the Harvard University Graduate School of Arts and Sciences

**EXTERNAL RESEARCH SUPPORT**

2005–2007	Smithsonian Astrophysical Observatory (with D. Koo; Koo PI) “Deep Chandra Imaging of the Extended Groth Strip: The Co-Evolution of Black Holes and Galaxies” (G05–6141A)	\$149,013
2005–2007	Space Telescope Science Institute “The Stellar Mass Function of Disks and Bulges at $z = 1$ ” (HST–AR–10651.01–A)	\$79,642
2005–2006	National Science Foundation “Collaborative Research: The DEEP Survey—Emergence of the Modern Universe (with D. Koo, P. Guhathakurta, and J. Miller; Faber PI) (AST–0507483)	\$431,046
2004–2006	Space Telescope Science Institute “The Evolution and Assembly of Galactic Disks; Integrated Studies of Mass, Stars, and Gas in the Extended Groth Strip” (HST–GO–10134.19–A)	\$250,050
2003–2005	Space Telescope Science Institute “Black Holes in Big Galaxies with Small Bulges” (HST–GO–09776.03–A)	\$17,799
2002–2006	NASA Theory Grant (with J. Primack and G. Blumenthal; Primack PI) “Studying Galaxy Formation and Evolution with New Data, Models and Methods” (NAG5–12326)	\$329,670
2001–2003	Center for Adaptive Optics, NSF Subcontract “Hands-On AO Teaching Demos” (AST–98 76783; Project 61)	\$59,401
2000–2004	National Science Foundation (with D. Koo and P. Guhathakurta; Faber PI) “The DEEP Survey of the Distant Universe” (AST 00–71198)	\$1,299,915
2000–2001	Gemini Fellowship (R. Schiavon PI; Faber administrative PI) “The Ages and Abundances of Galaxies at Intermediate to High Redshift” (GF–1002–00)	\$34,000
1999–2003	Center for Adaptive Optics, NSF Subcontract “AO PSF Characterization” (AST–98 76783; Project 14)	\$546,265
1999–2002	NASA Theory Grant (with J. Primack, G. Blumenthal, and A. Klypin; Primack PI) “Testing Inflation and Dark Matter with New Data, Models, and Methods” (NAG5–8218)	\$665,901
1999–2000	Gemini Fellowship (R. Schiavon PI; Faber administrative PI) “Stellar Population Synthesis” (GF–1002–99)	\$42,000
1998–2003	<i>Hubble Space Telescope</i> General Observer Grant (with N. Vogt PI; Faber administrative PI) “Infrared Imaging of High-Redshift Galaxies” (GO7883.01–96A)	\$100,027
1997–2002	California Association for Research in Astronomy, Keck II Telescope Instrumentation Grant “The DEEP Imaging Multi-Object Spectrograph (DEIMOS)”	\$3,909,000
1997–2002	Hubble Fellowship (K. Gebhardt PI; Faber administrative PI) “Dynamics of Dense Stellar Systems” (HF–01090.01–97A)	\$209,806

1997–1999	<i>Hubble Space Telescope</i> General Observer Grant “Black Holes and the Centers of Galaxies” (GO7388.02–96A)	\$30,000
1997–2002	National Science Foundation Major Research Instrumentation Program (with J. Wilhelm, J. Primack, and others; Wilhelm PI) “University of California, Santa Cruz Scientific Visualization Center” (CDA 97–24237)	\$460,000
1996–1999	National Science Foundation (with G. Illingworth and D. Koo; Faber PI) “Spectroscopic Survey of the Distant Universe” (AST 95–29098)	\$461,974
1996–1998	<i>Hubble Space Telescope</i> General Observer Grant (with G. Illingworth and D. Koo; Koo PI) “Kinematics and Structure of HDF Galaxies” (AR 06337.2194A)	\$54,700
1995–1999	<i>Hubble Space Telescope</i> General Observer Grant “Black Holes and Cores of Early-Type Galaxies” (GO6099.01–94A)	\$38,697
1995–1998	NASA Theory Grant (with J. Primack and G. Blumenthal; Primack PI) “Testing Inflation and Dark Matter” (NAG5–3061)	\$300,000
1995–1998	Caltech Grant (NASA, Wide-Field Camera) “On-Orbit Research with the Wide-Field Planetary Camera Team”	\$500,793
1994–1996	California Association for Research in Astronomy, Keck II Telescope Instrumentation Grant (with G. Illingworth, H. Epps and J. Miller; Illingworth PI) “The DEEP Imaging Multi-Object Spectrograph (DEIMOS)”	\$3,298,000
1994–1995	Caltech Grant (NASA, Wide-Field Camera) “On-Orbit Research with the Wide-Field Planetary Camera Team”	\$147,200
1993–1994	<i>Hubble Space Telescope</i> General Observer Grant “Cores of Early-Type Galaxies” (GO 2600.01–B7A)	\$19,077
1993–1994	Caltech Grant (NASA, Wide-Field Camera) “On-Orbit Research with the Wide-Field Planetary Camera Team”	\$299,033
1992–1996	National Science Foundation Facilities and Instrumentation Grant (with G. Illingworth and J. Miller; Illingworth PI) “Development of the Keck Telescope DEEP Spectrograph” (ARI 92–14621)	\$1,790,000
1992–1993	<i>Hubble Space Telescope</i> General Observer Grant “Cores of Early-Type Galaxies”	\$123,968
1991–1993	Calspace Grant “Advances in Modeling the Spectra of Cool Stars”	\$22,049
1991–1992	Caltech Grant (NASA, Wide-Field Camera) “On-Orbit Research and Instrument Verification with the Wide-Field Planetary Camera Team”	\$117,756
1991–1992	<i>Hubble Space Telescope</i> General Observer Grant “Cores of Early-Type Galaxies”	\$130,914
1988–1992	National Science Foundation Grant “Old Stellar Populations and Cosmology”	\$133,058
1988–1991	Caltech Grant (NASA, Wide-Field Camera) “Extragalactic Astronomy”	\$343,781
1987	Caltech Grant (NASA, Wide-Field Camera) “Research for <i>Hubble Space Telescope</i> ”	\$40,126

1986	Caltech Grant (NASA, Wide-Field Camera) “Research for <i>Hubble Space Telescope</i> ”	\$43,472
1985	Caltech Grant (NASA, Wide-Field Camera) “Research for <i>Hubble Space Telescope</i> ”	\$29,999
1985	National Science Foundation Grant “University of California Astrophysics Workshop”	\$8,400
1985	NASA Grant “University of California Astrophysics Workshop”	\$8,429
1984–1985	International Ultraviolet Explorer Grant “Metallicity and the Level of the UV Rising Branch in Elliptical Galaxies”	\$19,130
1983–1986	National Science Foundation Grant “Structure and Composition of Early-Type Galaxies”	\$115,800
1983–1985	NASA Grant “Composition and Ages of Elliptical Galaxies”	\$77,750
1983–1984	NATO Grant “Elliptical Galaxy Survey”	\$5,000
1982	Calspace Grant “Non-Luminous Matter in the Local Galaxy”	\$5,890
1982	NATO Grant “Neutral H I Gas Distribution in Elliptical Galaxies	\$3,000
1977–1978	National Science Foundation Grant “Chemical Abundances in Old Stellar Populations”	\$35,000
1977–1981	Alfred P. Sloan Foundation Fellowship	\$18,000
1976–1979	NASA Grant “Heavy-Element Abundances in Old Stellar Populations in Galaxies”	\$38,000
1976–1977	National Science Foundation Grant “Area Scanning with the Lick Image Dissector Scanner”	\$40,400
1974	National Science Foundation Grant	\$10,000

### BOOK REVIEWS

1. Structure and properties of nearby galaxies. S.M. Faber. *Sky and Telescope*, **58**, 454–465, 1979.

### BOOKS

1. *Nearly Normal Galaxies: From the Planck Time to the Present*. Proceedings of the Eighth Santa Cruz Summer Workshop in Astronomy and Astrophysics, ed. S.M. Faber (New York: Springer-Verlag), 1987. Reviewed in *The Observatory* (**108**, 185, 1988), *Journal of the British Astronomical Association* (**98**, 122, 1988), *Sky and Telescope* (**75**, 160, 1988), and *Space Science Reviews* (**53**, 166, 1990).

**PUBLICATIONS**

1. Parallax and mass ratio of the visual binary Hu 1176 from photographs taken with the 24-inch Sproul refractor. P. van de Kamp and S.M. Faber. *AJ*, **71**, 524–526, 1966.
2. On color effects in astrometry. S.M. Faber. *PASP*, **79**, 611–614, 1967.
3. Faint blue objects in the Virgo cluster region. V.C. Rubin, S.M. Faber and F.C. Bertiau. *AJ*, **72**, 59–63 with plates from 109–123, 1967.
4. The Ba II star  $\xi$  Cygni. F.R. Chromey, S.M. Faber, A. Wood and I.J. Danziger. *ApJ*, **158**, 599–606, 1969.
5. Rotational velocities of evolved A and F stars. S.M. Faber and I.J. Danziger. In: *Stellar Rotation, IAU Colloquium No. 4*, ed. A. Slettebak (Dordrecht: Reidel), 39–47, 1970.
6. Rotation of evolving A and F stars. I.J. Danziger and S.M. Faber. *Astron. & Ap.*, **18**, 428–443, 1972. Also published as: Rotation of evolving A and F stars (Danziger+ 1972). *VizieR Online Data Catalog*, **3022**, 1996.
7. Quadratic programming applied to the problem of galaxy population synthesis. S.M. Faber. *Astron. & Ap.*, **20**, 361–374, 1972.
8. Tidal origin of elliptical galaxies of high surface brightness. S.M. Faber. *ApJ*, **179**, 423–426, 1973.
9. Variations in spectral-energy distributions and absorption-line strengths among elliptical galaxies. S.M. Faber. *ApJ*, **179**, 731–754, 1973.
10. Ten-color stellar photometry. S.M. Faber. *Astron. & Ap. Suppl.*, **10**, 201–216, 1973.
11. Velocity dispersions and mass-to-light ratios for elliptical galaxies. S.M. Faber and R.E. Jackson. *AJ*, **204**, 668–683, 1976. Also published as: *Lick Observatory Bulletin*, **714**, 1976.
12. H I in early-type galaxies. I. Observations. J.S. Gallagher, S.M. Faber and B. Balick. *ApJ*, **202**, 7–21, 1975.
13. H I in early-type galaxies. II. Mass loss and galactic winds. S.M. Faber and J.S. Gallagher. *ApJ*, **204**, 365–378, 1976. Also published as: *Lick Observatory Bulletin*, **709**, 1976.
14. A rediscussion of the local space density of M dwarf stars. S.M. Faber, D. Burstein, B.M. Tinsley and I.R. King. *AJ*, **81**, 45–52, 1977.
15. H I in early-type galaxies. III. Observations of 50 galaxies. B. Balick, S.M. Faber and J.S. Gallagher. *ApJ*, **209**, 710–715, 1976. Also published as: *Lick Observatory Bulletin*, **726**, 1976.
16. Velocity dispersions for X-ray clusters of galaxies. S.M. Faber and A. Dressler. *ApJ*, **210**, L65–L67, 1976. Also published as: *Lick Observatory Bulletin*, **743**, 1976.
17. Approximate MK spectral classification of A and F stars based on *ubvy* and H $\beta$  photometry. S.M. Faber. *PASP*, **89**, 23–28, 1977.
18. The neutral hydrogen content, stellar rotation curve, and mass-to-light ratio of NGC 4594, the “Sombrero” galaxy. S.M. Faber, B. Balick, J.S. Gallagher and G.R. Knapp. *ApJ*, **214**, 383–389, 1977.

19. Radial velocities for galaxies in 11 clusters. S.M. Faber and A. Dressler. *AJ*, **82**, 187–192, 1977. Also published as: *Lick Observatory Bulletin*, **753**, 1977.
20. Spectrum of the halo of the cD galaxy in Abell 401. S.M. Faber, D. Burstein and A. Dressler. *AJ*, **82**, 941–946, 1977. Also published as: *Lick Observatory Bulletin*, **772**, 1977.
21. The chemical composition of old stellar populations. S.M. Faber. In: *The Evolution of Galaxies and Stellar Populations*, eds. B. Tinsley and R. Larson (New Haven: Yale University Printing Service), 157–198, 1977.
22. Neutral hydrogen in the normal elliptical galaxy NGC 4278. J.S. Gallagher, G.R. Knapp, S.M. Faber and B. Balick. *ApJ*, **215**, 463–473, 1977.
23. H I observations of 40 S0 and elliptical galaxies. G.R. Knapp, J.S. Gallagher, S.M. Faber and B. Balick. *AJ*, **82**, 106–112, 1977.
24. H I in the elliptical galaxy NGC 1052. G.R. Knapp, J.S. Gallagher and S.M. Faber. *AJ*, **83**, 139–143, 1978. Also published as: *Lick Observatory Bulletin*, **784**, 1978.
25. Neutral hydrogen in the elliptical galaxy NGC 4636. G.R. Knapp, S.M. Faber and J.S. Gallagher. *AJ*, **83**, 11–12, 1978.
26. Masses and mass-to-light ratios of galaxies. S.M. Faber and J.S. Gallagher. *Ann. Rev. Astron. Astrophys.*, **17**, 135–187, 1979.
27. Spectrometer, Definition of. S.M. Faber. In: *World Book Encyclopedia*, 1979.
28. Possible M dwarf enrichment in the semistellar nucleus of M31. S.M. Faber and H.B. French. *ApJ*, **235**, 405–412, 1980. Also published as: *Lick Observatory Bulletin*, **823**, 1980.
29. B-V color profiles of the luminous elliptical galaxies NGC 4472 and NGC 5846 and the cD galaxy NGC 6166. J.S. Gallagher, S.M. Faber and D. Burstein. *ApJ*, **235**, 743–748, 1980. (N62)
30. The structure of galactic nuclei: Recent observations. S.M. Faber. In: *Highlights of Astronomy, Volume 5*, Proceedings of the 17th General Assembly of the International Astronomical Union, Montreal, Canada, August 14–24, 1979, ed. P.A. Wayman (Dordrecht: Reidel), 135–142, 1980. (N100)
31. The ultraviolet continua of the nuclei of M31 and M81. C.C. Wu, S.M. Faber, J.S. Gallagher, M. Peck and B.M. Tinsley. *ApJ*, **237**, 290–302, 1980. (N131)
32. Sky glow at Lick Observatory. S.M. Faber. *Lighting Design and Application*, **10**, 18–22, 1980. (N102)
33. The scientific case for a 10-meter telescope. S.M. Faber. In: *Optical and Infrared Telescopes of the 1990's* (Tucson: Kitt Peak National Observatory), 304–328, 1980. (N88)
34. H I synthesis observations of the elliptical galaxy NGC 4278. E. Raimond, S.M. Faber, J.S. Gallagher and G. R. Knapp. *ApJ*, **246**, 708–721, 1981. (N103)
35. The metallicities, velocity dispersions and true shapes of elliptical galaxies. R. Terlevich, R.L. Davies, S.M. Faber and D. Burstein. *MNRAS*, **196**, 381–395, 1981. (N87)
36. Obituary for Beatrice Tinsley. S.M. Faber. *Physics Today*, **34**, 110–112, 1981. (N134)

37. H I observations of strongly interacting galaxies. J.S. Gallagher, G.R. Knapp and S.M. Faber. *AJ*, **86**, 1781–1790, 1981. (N139)
38. Chapter 4: Extragalactic astronomy. S.M. Faber. In: *Challenges to Astronomy and Astrophysics: Working Documents of the Astronomy Survey Committee*, ed. P. Blanchard (Washington, DC: National Academy of Sciences/National Research Council), 177–222, 1981. (N109)
39. Line-strength anomalies in the integrated spectra of M31 globular clusters. D. Burstein, S.M. Faber, C.M. Gaskell and N. Krumm. In: *Astrophysical Parameters For Globular Clusters, I.A.U. Colloquium No. 68*, eds. A.G. Davis Philip and D.S. Haynes (Schenectady: L. Davis Press), 441–450, 1981.
40. Galaxy formation via hierarchical clustering and dissipation: The structure of disk systems. S.M. Faber. In: *Astrophysical Cosmology*, Proceedings of the Vatican Study Week on Cosmology and Fundamental Physics, Vatican City State, September 28–October 2, 1981, eds. H.A. Bruck, G.V. Coyne and M.S. Longair (Vatican City: Pontificia Academia Scientiarum), 191–194, 1982.
41. Galaxy formation via hierarchical clustering and dissipation: The structure of spheroids. S.M. Faber. In: *Astrophysical Cosmology*, Proceedings of the Vatican Study Week on Cosmology and Fundamental Physics, Vatican City State, September 28–October 2, 1981, eds. H.A. Bruck, G.V. Coyne and M.S. Longair (Vatican City: Pontificia Academia Scientiarum), 219–231, 1983.
42. Is there nonluminous matter in dwarf spheroidal galaxies? S.M. Faber and D.N.C. Lin. *ApJ*, **266**, L17–L20, 1983.
43. Some implications of nonluminous matter in dwarf spheroidal galaxies. D.N.C. Lin and S.M. Faber. *ApJ*, **266**, L21–L25, 1983.
44. Palomar loses a round in light pollution battle. R. Brucato, S. Faber, C. Sagan and D. Crawford. *Sky and Telescope*, **66**, 113, 1983.
45. Large optical telescopes: New views into space and time. S.M. Faber. *Ann. N.Y. Acad. Sci.*, **422**, 171–179, 1983.
46. Dark matter in dwarf spheroids. M. Aaronson, S.M. Faber and D.N.C. Lin. *Science News*, **123**, 184–185, 1983.
47. The stellar content of elliptical nuclei. S.M. Faber. In: *Highlights of Astronomy, Volume 6*, Proceedings of the 18th General Assembly of the International Astronomical Union, Patras, Greece, August 17–26, 1982, ed. R.A. West (Dordrecht: Reidel), 165–171, 1983.
48. Galaxy formation and cosmology. In: *Large-Scale Structure of the Universe, Cosmology and Fundamental Physics*, Proceedings of the 1st ESO/CERN Symposium held 21–25 November, 1983 at CERN, Geneva, eds. G. Setti and L. van Hove (Garching: European Southern Observatory), 187–203, 1983.
49. Formation of galaxies and large-scale structure with cold dark matter. G.R. Blumenthal, S.M. Faber, J.R. Primack and M.J. Rees. *Nature*, **311**, 517–525, 1984. (C436). Reprinted in *The Early Universe: Reprints, Frontiers in Physics*, eds. E.W. Kolb and M.S. Turner (Reading: Addison-Wesley), 617–625, 1988.

50. The distribution of neutral hydrogen in the Sombrero Galaxy, NGC 4594. E. Bajaja, G. van der Burg, S.M. Faber, J.S. Gallagher, G.R. Knapp and W.W. Shane. *Astron. & Ap.*, **141**, 309–317, 1984.
51. Old stellar populations. I. A spectroscopic comparison of galactic globular clusters, M31 globular clusters, and elliptical galaxies. D. Burstein, S.M. Faber, C.M. Gaskell and N. Krumm. *ApJ*, **287**, 586–609, 1984. (B986)
52. Old stellar populations. II. An analysis of K-giant spectra. S.M. Faber, E.D. Friel, D. Burstein and C.M. Gaskell. *ApJS*, **57**, 711–741, 1985. (B999)
53. High-resolution near-infrared spectra of normal and super-metal-rich K giants. H.E. Bond, D. Burstein, S.M. Faber and R.E. Luck. *AJ*, **90**, 1349–1353, 1985. (B1009)
54. Masses and mass-to-light ratios of galaxies. S.M. Faber and J.S. Gallagher. *Ann. Rev. Astron. Ap.*, **17**, 135–187, 1979. “Citation Classic” in *Current Contents*, **25**, 44, 1985.
55. Contraction of dark matter galactic halos due to baryonic infall. G.R. Blumenthal, S.M. Faber, R. Flores and J.R. Primack. *ApJ*, **301**, 27–34, 1986.
56. Old stellar populations. III. The metallicities of M5, M71, and M67. D. Burstein, S.M. Faber and J. Gonzalez. *AJ*, **91**, 1130–1139, 1986.
57. The distribution and kinematics of H I in the active elliptical galaxy NGC 1052. J.H. van Gorkom, G.R. Knapp, E. Raimond, S.M. Faber and J.S. Gallagher. *AJ*, **91**, 791–807, 1986.
58. Elliptical galaxies and non-uniformities in the Hubble flow. D. Burstein, R.L. Davies, A. Dressler, S.M. Faber, D. Lynden-Bell, R. Terlevich and G. Wegner. In: *Galaxy Distances and Deviations from Universal Expansion*, Proceedings of the NATO Advanced Research Workshop, Kona, HI, Jan. 13–17, 1986, ed. B. Madore (Dordrecht: Reidel), 123–130, 1986.
59. Introduction to *My Daughter Beatrice*, by Edward Hill (New York: American Physical Society), i, 1986.
60. Global scaling relations for elliptical galaxies and implications for formation. S.M. Faber, D. Burstein, R.L. Davies, A. Dressler, D. Lynden-Bell, R. Terlevich and G. Wegner. In: *Nearly Normal Galaxies: From the Planck Time to the Present*, Proceedings of the Eighth Santa Cruz Summer Workshop in Astronomy and Astrophysics, ed. S. M. Faber (New York: Springer Verlag), 175–183, 1987.
61. Dark matter: Key issues. S.M. Faber. In: *Dark Matter in the Universe*, *IAU Symposium No. 117*, eds. J. Kormendy and G. Knapp (Dordrecht: Reidel), 1–16, 1987.
62. Spectroscopy and photometry of elliptical galaxies. I. A new distance estimator. A. Dressler, D. Lynden-Bell, D. Burstein, R. Davies, S.M. Faber, G. Wegner and R. Terlevich. *ApJ*, **313**, 42–58, 1987.
63. Non-uniformities in the Hubble Flow: Results from a survey of elliptical galaxies. R.L. Davies, D. Burstein, A. Dressler, S.M. Faber, D., Lynden-Bell, R. Terlevich and G. Wegner. In: *Observational Cosmology*, *IAU Symposium No. 124*, eds. A. Hewitt, G. Burbidge and L.Z. Fang (Dordrecht: Reidel), 223–227, 1987.

64. Ultraviolet energy distributions of 32 early type galaxies. F. Bertola, D. Burstein, L.M. Buson, S.M. Faber and T.R. Lauer. In: *Structure and Dynamics of Elliptical Galaxies, IAU Symposium No. 127*, ed. T. de Zeeuw (Dordrecht: Reidel), 439, 1987.
65. Spectroscopy and photometry of elliptical galaxies. II. The spectroscopic parameters. R.L. Davies, D. Burstein, A. Dressler, S.M. Faber, D. Lynden-Bell, R. Terlevich and G. Wegner. *ApJS*, **65**, 581–600, 1987.
66. Spectroscopy and photometry of elliptical galaxies. III. UBV aperture photometry, CCD photometry, and magnitude-related parameters. D. Burstein, R.L. Davies, A. Dressler, S.M. Faber, R.P.S. Stone, D. Lynden-Bell, R. Terlevich and G. Wegner. *ApJS*, **64**, 601–642, 1987.
67. Spectroscopy and photometry of elliptical galaxies: A large-scale streaming motion in the local universe. A. Dressler, S.M. Faber, D. Burstein, R.L. Davies, D. Lynden-Bell, R. Terlevich and G. Wegner. *ApJ*, **313**, L37–L42, 1987. Reprinted in *The Early Universe: Reprints, Frontiers in Physics*, eds. E.W. Kolb and M.S. Turner (Reading: Addison-Wesley), 171–176, 1988.
68. Growth of structure in the universe. A. Dekel, S.M. Faber and M. Davis. In: *From the Planck Scale to the Weak Scale: Toward a Theory of the Universe*. Proceedings of the Theoretical Advanced Study Institute in Elementary Particle Physics, University of California, Santa Cruz, 1986, Volume 2, ed. H. Haber (Singapore: World Scientific Publishing Co.), 787–944, 1987.
69. Spectroscopy and photometry of elliptical galaxies. V. Galaxy streaming towards the new supergalactic centre. D. Lynden-Bell, S.M. Faber, D. Burstein, R.L. Davies, A. Dressler, R. Terlevich and G. Wegner. *ApJ*, **326**, 19–49, 1988.
70. The far-ultraviolet spectra of early-type galaxies. D. Burstein, F. Bertola, L. Buson, S.M. Faber and T. Lauer. *ApJ*, **328**, 440–462, 1988.
71. Pregalactic formation of globular clusters in cold dark matter. E.I. Rosenblatt, S.M. Faber and G. Blumenthal. *ApJ*, **330**, 191–200, 1988.
72. Elliptical galaxies and large-scale velocity flows. S.M. Faber, D. Burstein, R.L. Davies, A. Dressler, D. Lynden-Bell and G. Wegner. In: *Large-Scale Structure of the Universe, IAU Symposium No. 130*, eds. J. Audouze, M.-C. Pelletan and A. Szalay (Dordrecht: Reidel), 169–176, 1988.
73. Spiral galaxies, elliptical galaxies, and the large-scale velocity field within 3500 km s<sup>-1</sup> of the Local Group. D. Burstein, R. L. Davies, A. Dressler, D. Lynden-Bell, R. Terlevich and G. Wegner. In: *Large-Scale Structure of the Universe, IAU Symposium No. 130*, eds. J. Audouze, M.-C. Pelletan and A. Szalay (Dordrecht: Reidel), 177–180, 1988.
74. Global stellar populations of elliptical galaxies. A. Optical properties. D. Burstein, R.L. Davies, A. Dressler, S.M. Faber, D. Lynden-Bell, R. Terlevich and G. Wegner. In: *Towards Understanding Galaxies at Large Redshift*, Proceedings of the Fifth Workshop of the Advanced School of Astronomy, Erice, Italy, June 1–10, 1987, eds. R. G. Kron and A. Renzini (Dordrecht: Kluwer), 17–21, 1988.

75. Global stellar populations of elliptical galaxies. B. Ultraviolet-energy distributions. D. Burstein, F. Bertola, L.M. Buson, S.M. Faber and T. Lauer. In: *Towards Understanding Galaxies at Large Redshift*, Proceedings of the Fifth Workshop of the Advanced School of Astronomy, Erice, Italy, June 1–10, 1987, eds. R. G. Kron and A. Renzini (Dordrecht: Kluwer), 23–28, 1988.
76. Toward an analysis of bulk motion from a large sample of spiral galaxies using H I and H  $\alpha$  velocity widths. S. Courteau and S.M. Faber. In: *The Extragalactic Distance Scale*, Proceedings of the ASP 100<sup>th</sup> Anniversary Symposium, held in Victoria, British Columbia, June 29–July 1, 1988, eds. S. van den Bergh and C.J. Pritchett (San Francisco: Astronomical Society of the Pacific), 366–367, 1988.
77. Velocity residuals in the 'Great Attractor' flow field using revised group velocities. R. Nolthenius and S.M. Faber. In: *The Extragalactic Distance Scale*, Proceedings of the ASP 100<sup>th</sup> Anniversary Symposium, held in Victoria, British Columbia, June 29–July 1, 1988, eds. S. van den Bergh and C.J. Pritchett (San Francisco: Astronomical Society of the Pacific), 368–369, 1988.
78. On best distance estimators and galaxy streaming. D. Lynden-Bell, D. Burstein, R.L. Davies, A. Dressler, S.M. Faber, R. Terlevich and G. Wegner. In: *The Extragalactic Distance Scale*, Proceedings of the ASP 100<sup>th</sup> Anniversary Symposium, held in Victoria, British Columbia, June 29–July 1, 1988, eds. S. van den Bergh and C. J. Pritchett (San Francisco: Astronomical Society of the Pacific), 307–316, 1988.
79. Spectroscopy and photometry of elliptical galaxies. VI. Sample selection and data summary. S.M. Faber, G. Wegner, D. Burstein, R.L. Davies, A. Dressler, D. Lynden-Bell and R. Terlevich. *ApJS*, **69**, 763–808, 1989. Also published as: Spectroscopy and photometry of elliptical galaxies. VI. Sample selection and data summary (Faber+ 1989), *VizieR Online Data Catalog*, **7176**, 1994.
80. Spectroscopy and photometry of elliptical galaxies. VI. Sample selection and data summary: Erratum. S.M. Faber, G. Wegner, D. Burstein, R.L. Davies, A. Dressler, D. Lynden-Bell and R. Terlevich. *ApJS*, **71**, 173, 1989.
81. Motions of galaxies in the neighborhood of the Local Group. S.M. Faber and D. Burstein. In: *Large-Scale Motions in the Universe: A Vatican Study Week*, eds. V. C. Rubin and G.V. Coyne (Princeton: Princeton University Press), 115–167, 1989.
82. Large-scale motions in the nearby universe. D. Burstein, R.L. Davies, A. Dressler, S.M. Faber, D. Lynden-Bell, R. Terlevich and G. Wegner. In: *Large-Scale Structure and Motions in the Universe*, Proceedings of the International Meeting, Trieste, Italy, April 6–9, 1988, eds. M. Messetti, G. Giuricin, F. Mardirossian and M. Ramella (Dordrecht: Kluwer), 179–194 and discussion on 195–196, 1989.
83. Confirmation of a large-scale, large-amplitude flow in the direction of the Great Attractor. A. Dressler and S.M. Faber. *ApJ*, **354**, 13–17, 1990.
84. The correlation of X-ray and optical luminosities of early-type galaxies using new  $D_n - \sigma$  distances. R.H. Donnelly, S.M. Faber and R.M. O'Connell. *ApJ*, **354**, L52–L57, 1990.
85. Evidence from the motions of galaxies for a large-scale, large-amplitude flow towards the Great Attractor. D. Burstein, S.M. Faber and A. Dressler. *ApJ*, **354**, 18–32, 1990.

86. New measurements of distances to spirals in the Great Attractor: Further confirmation of the large-scale flow. A. Dressler and S.M. Faber. *ApJ*, **354**, L45–L48, 1990.
87. Potential, velocity, and density fields from sparse and noisy redshift-distance samples: Method. A. Dekel, E. Bertschinger and S.M. Faber. *ApJ*, **364**, 349–369, 1990.
88. Potential, velocity, and density fields from redshift-distance samples: Application: Cosmography within  $6000 \text{ km s}^{-1}$ . E. Bertschinger, A. Dekel, S.M. Faber, A. Dressler and D. Burstein. *ApJ*, **364**, 370–395, 1990.
89. Correlations between line strengths and fine structure in elliptical galaxies. F. Schweizer, P. Seitzer, S.M. Faber, D. Burstein, C. Dalle Ore and J.J. Gonzalez. *ApJ*, **364**, L33–L36, 1990.
90. Galaxy velocity dispersions using a cross-correlation method. C. Dalle Ore, S.M. Faber, J.J. Gonzalez, R. Stoughton and D. Burstein. *ApJ*, **366**, 38–49, 1991.
91. Galaxy velocity dispersions using a cross-correlation method: Erratum. C. Dalle Ore, S.M. Faber, J.J. Gonzalez, R. Stoughton and D. Burstein. *ApJ*, **375**, 427, 1991.
92. Reduction of PG:1115+080 images. E.J. Groth, J.A. Kristian, S.P. Ewald, J.J. Hester, J.A. Holtzman, T.R. Lauer, R.M. Light, E.J. Shaya, W.A. Baum, B. Campbell, A. Code, D.G. Currie, G.E. Danielson, S.M. Faber, J. Hoessel, D. Hunter, T. Kelsall, R. Lynds, G. Mackie, D.G. Monet, E.J. O'Neil Jr., D.P. Schneider, P.K. Seidelmann, B. Smith and J.A. Westphal. In: *The First Year of HST Observations*, Proceedings of a workshop held at the Space Telescope Science Institute, Baltimore, Maryland, May 14–16, 1991, eds. A.L. Kinney and J.C. Blades (Baltimore: Space Telescope Science Institute), 192–195, 1991.
93. New velocity dispersions and photometry for E and S0 galaxies in the Great Attractor. A. Dressler, S.M. Faber and D. Burstein. *ApJ*, **368**, 54–59, 1991.
94. The imaging performance of the *Hubble Space Telescope*. C.J. Burrows, J.A. Holtzman, S.M. Faber, P.Y. Bely, H. Hasan, C.R. Lynds and D. Schroeder. *ApJ*, **369**, L21–L25, 1991.
95. NGC 1068: Resolution of nuclear structure in the optical continuum. R. Lynds, S.M. Faber, E.J. Groth, J.A. Holtzman, R.M. Light, E.J. O'Neil, W.A. Baum, D.G. Currie, S.P. Ewald, J.J. Hester, J.A. Kristian, P.K. Seidelmann, E.J. Shaya and J.A. Westphal. *ApJ*, **369**, L31–L34, 1991.
96. Stellar photometry with the *Hubble Space Telescope* Wide-Field/Planetary Camera: A progress report. J.A. Holtzman, E.J. Groth, R.M. Light, S.M. Faber, and 15 members of the WFPC Team. *ApJ*, **369**, L35–L40, 1991.
97. The core of the nearby S0 galaxy NGC 7457 imaged with the *HST* Planetary Camera. T.R. Lauer, S.M. Faber and 13 members of the WFPC Team. *ApJ*, **369**, L41–L44, 1991.
98. The postcollapse core of M15 imaged with the *HST* Planetary Camera. T.R. Lauer, J.A. Holtzman, S.M. Faber and 12 members of the WFPC Team. *ApJ*, **369**, L45–L50, 1991.
100. *Hubble Space Telescope* Wide-Field/Planetary Camera images of Saturn. J.A. Westphal, W.A. Baum, T.R. Lauer, G.E. Danielson, D.G. Currie, S.P. Ewald, S.M. Faber, E.J. Groth, J.J. Hester, R.M. Light, R. Lynds, E.J. O'Neil, P.K. Seidelmann, E.J. Shaya and B.A. Smith. *ApJ*, **369**, L51–L54, 1991.

101. Ionization fronts and shocked flows: The structure of the Orion Nebula at 0".1. J.J. Hester, R. Gilmozzi, C.R. O'Dell, S.M. Faber and 13 members of the WFPC Team. *ApJ*, **369**, L59–L75, 1991.
102. Dependence of galaxy properties on viewing angle. D. Burstein, M.P. Haynes and S.M. Faber. *Nature*, **353**, 515–521, 1991.
103. Absorption-line spectra of elliptical galaxies and elliptical galaxy formation. S.M. Faber, G. Worthey and J.J. Gonzalez. In: *Stellar Populations of Galaxies, IAU Symposium No. 149*, eds. B. Barbuy and A. Renzini (Dordrecht: Kluwer), 255–265, 1992.
104. Optical thickness of galaxies. Letter to the Editor. M. Disney, D. Burstein, M.P. Haynes and S.M. Faber. *Nature*, **356**, 114, 1992.
105. Planetary Camera observations of NGC 1275: Discovery of a central population of compact massive blue star clusters. J.A. Holtzman, S.M. Faber, E.J. Shaya, T.R. Lauer and members of the WFPC Team. *AJ*, **103**, 691–702, 1992.
106. Planetary Camera observations of the M87 stellar cusp. T.R. Lauer, S.M. Faber, C.R. Lynds, W.A. Baum and members of the WFPC Team. *AJ*, **103**, 703–710, 1992.
107. Planetary Camera observations of the central parsec of M32. T.R. Lauer, S.M. Faber, J.A. Holtzman and members of the WFPC Team. *AJ*, **104**, 552–562, 1992.
108. *Hubble Space Telescope* Planetary Camera images of R136. B. Campbell, D.A. Hunter, J.A. Holtzman, T.R. Lauer, E.J. Shayer, A. Code, S.M. Faber, E.J. Groth, R.M. Light, R. Lynds, E.J. O'Neil Jr. and J.A. Westphal. *AJ*, **104**, 1721–1742, 1992.
109. Mg and Fe absorption features in elliptical galaxies. G. Worthey, S.M. Faber and J.J. Gonzalez. *ApJ*, **398**, 69–73, 1992.
110. Dynamically hot galaxies. I. Structural properties. R. Bender, D. Burstein and S.M. Faber. *ApJ*, **399**, 462–477, 1992.
111. Dynamically hot galaxies. II. Global stellar populations. R. Bender, D. Burstein and S.M. Faber. *ApJ*, **411**, 153–169, 1993.
112. Streaming motions in the local universe: Evidence for large-scale, low-amplitude density fluctuations. S. Courteau, S.M. Faber, A. Dressler and J.A. Willick. *ApJ*, **412**, L51–L54, 1993.
113. Rotation curves from baryonic infall: Dependence on disk-to-halo ratio, initial angular momentum, and core radius, and comparison with data. R. Flores, J. R. Primack, G.R. Blumenthal and S.M. Faber. *ApJ*, **412**, 443–454, 1993.
114. Old stellar populations. IV. Empirical fitting functions for features in the spectra of G-stars and K-stars. J. Gorgas, S.M. Faber, D. Burstein, J. J. Gonzalez, S. Courteau and C. Prosser. *ApJS*, **86**, 153–198, 1993.
115. Simulations of the cluster population in NGC 1275. S.M. Faber. In: *The Globular Cluster – Galaxy Connection, ASP Conference Series No. 48*, Proceedings of the 11th Santa Cruz Summer Workshop in Astronomy and Astrophysics, held July 19–29, 1992, at the University of California, Santa Cruz, eds. G. H. Smith and J. P. Brodie (San Francisco: Astronomical Society of the Pacific), 601–607, 1993.

116. Spectral features in globular clusters and elliptical galaxies. S.M. Faber and G. Worthey. In: *The Globular Cluster–Galaxy Connection, ASP Conference Series No. 48*, Proceedings of the 11th Santa Cruz Summer Workshop in Astronomy and Astrophysics, held July 19–29, 1992, at the University of California, Santa Cruz, eds. G.H. Smith and J.P. Brodie (San Francisco: Astronomical Society of the Pacific), 508–518, 1993.
117. The structural properties of dynamically hot galaxies. D. Burstein, R. Bender and S.M. Faber. In: *Structure, Dynamics and Chemical Evolution of Elliptical Galaxies*, ESO Conference and Workshop Proceedings, Proceedings of an ESO/EIPC Workshop, Marciana Marina, Isola d'Elba, 25–30 May, 1992, eds. I. J. Danziger, W.W. Zeilinger and K. Kjaer (Garching: European Southern Observatory), 31–42, 1993.
118. Wide-Field Camera observations of Baade's Window. J.A. Holtzman and members of the WFPC Team. *AJ*, **106**, 1826–1838, 1993.
119. Planetary Camera observations of the double nucleus of M31. T.R. Lauer, S.M. Faber and members of the WFPC Team. *AJ*, **106**, 1436–1447, 1993.
120. A homogeneous catalog of 3300<sup>+</sup> galaxy peculiar motions. S.M. Faber, S. Courteau, A. Dekel, A. Dressler, T. Kolatt, J.A. Willick and A. Yahil. In: *Cosmic Velocity Fields*, Proceedings of the 9th IAP Astrophysics Meeting, Institut d'Astrophysique, Paris, July 12–17, 1993, eds. F. Bouchet and M. Lachièze-Rey (Gif sur Yvette: Editions Frontières), 15–22, 1993.
121. What I learned this week in Paris (about cosmic velocity fields). S.M. Faber. In: *Cosmic Velocity Fields*, Proceedings of the 9th IAP Astrophysics Meeting, Institut d'Astrophysique, Paris, July 12–17, 1993, eds. F. Bouchet and M. Lachièze-Rey (Gif sur Yvette: Editions Frontières), 485–496, 1993.
122. Old stellar populations. V. Absorption feature indices for the complete Lick/IDS sample of stars. G. Worthey, S.M. Faber, J.J. Gonzalez and D. Burstein. *ApJS*, **94**, 687–722, 1994. Also published as: Old stellar populations. V. Absorption feature indices for the complete Lick/IDS sample of stars (Worthey+ 1994), *VizieR Online Data Catalog*, **209**, 1994.
123. Cosmic velocity flows. S.M. Faber, S. Courteau, A. Dekel and A. Dressler. *J. of Roy. Soc. Canada*, **88**, 92–113, 1994.
124. *Hubble Space Telescope* Planetary Camera observations of Arp 220. E.J. Shaya, D.M. Dowling, D.G. Currie, S.M. Faber and E.J. Groth. *AJ*, **107**, 1675–1685, 1994.
125. A family of models for spherical stellar systems. S. Tremaine, D.O. Richstone, Y.I. Byun, A. Dressler et al. *AJ*, **107**, 634–644, 1994.
126. *HST* photometry of the cores of early-type galaxies. J. Kormendy, A. Dressler, Y.I. Byun, S.M. Faber, C. Grillmair, T.R. Lauer, D. Richstone and S. Tremaine. In: *Dwarf Galaxies*, ESO Conference and Workshop Proceedings, Proceedings of an ESO/OHP Workshop on Dwarf galaxies, held at Observatoire de Haute-Provence, France, 6–9 September 1993, eds. G. Meylan and P. Prugniel (Garching: European Southern Observatory), 147–160, 1994.
127. Global properties and formation of dynamically hot galaxies. R. Bender, D. Burstein and S.M. Faber. In: *Panchromatic View of Galaxies: Their Evolutionary Puzzle*, Proceedings of the International Scientific Spring Meeting of the Astronomische Gesellschaft held in Kiel, Germany, March 8–12, 1993, eds. G. Hensler, C. Theis and J. Gallagher (Gif sur Yvettes: Editions Frontières), 99, 1994.

128. The nuclear regions of NGC 3311 and NGC 7768 imaged with the *HST* Planetary Camera. C.J. Grillmair, S.M. Faber, T.R. Lauer, W.A. Baum and members of the WFPC Team. *AJ*, **108**, 102–110, 1994.
129. The stellar ages of elliptical galaxies. S.M. Faber, S.C. Trager, J.J. Gonzalez and G. Worthey. In: *Stellar Populations, IAU Symposium No. 164*, eds. P.C. van der Kruit and G. Gilmore (Dordrecht: Kluwer), 249–257, 1995.
130. Globular clusters in Coma galaxy NGC 4881. W.A. Baum, M. Hammergren, E.J. Groth, E.A. Ajhar et al. *AJ*, **110**, 2537–2552, 1995.
131. The centers of early-type galaxies with *HST*. I. An observational survey. T.R. Lauer, E.A. Ajhar, Y. Byun, A. Dressler, S.M. Faber et al. *AJ*, **110**, 2622–2654, 1995.
132. High-resolution spectra of distant compact narrow emission-line galaxies: Progenitors of spheroidal galaxies? D.C. Koo, R. Guzman, S.M. Faber, G.D. Illingworth et al. *ApJ*, **440**, L49–L52, 1995.
133. Omega and biasing from optical galaxies versus POTENT mass. M.J. Hudson, A. Dekel, S. Courteau, S.M. Faber and J.A. Willick. In: *Clustering in the Universe*, Proceedings of the 30th Rencontres de Moriond, Moriond Astrophysics Meeting, held in Les Arcs, Savoie, France, March 11–18, 1995, eds. S. Maurogordato, C. Balkowski, C. Tao, and J. Tran Thanh Van (Paris: Editions Frontiers), 105–110, 1995.
134. Homogeneous velocity-distance data for peculiar velocity analysis. I. Calibration of cluster samples. J.A. Willick, S. Courteau, S.M. Faber, D. Burstein et al. *ApJ*, **446**, 12–38, 1995. Also published as: Mark III catalog of galaxy peculiar velocities (Willick+ 1997), *VizieR Online Data Catalog*, **7198**, 1996.
135. Towards understanding the physical properties of stellar systems. D. Burstein, R. Bender, S.M. Faber and R. Nolthenius. *Astrophysical Letters and Communications*, **31**, 95–108, 1995.
136.  $\Omega$  and biasing from optical galaxies vs. POTENT mass. M.J. Hudson, A. Dekel, S. Courteau, S.M. Faber and J.A. Willick. *MNRAS*, **274**, 305–316, 1995.
137. The galaxian age-metallicity relation. G. Worthey, S.C. Trager and S.M. Faber. In: *Fresh Views of Elliptical Galaxies*, eds. A. Buzzoni, A. Renzini and A. Serrano (San Francisco: Astronomical Society of the Pacific), **86**, 203–206, 1995.
138. Homogeneous velocity-distance data for peculiar velocity analysis. II. Calibration of field samples. J.A. Willick, S. Courteau, S.M. Faber, D. Burstein, A. Dekel and T. Kolatt. *ApJ*, **457**, 460–489, 1996. Also published as: Mark III catalog of galaxy peculiar velocities (Willick+ 1997), *VizieR Online Data Catalog*, **7198**, 1996.
139. *Hubble Space Telescope* spectroscopic evidence for a  $2 \times 10^9 M_{\odot}$  black hole in NGC 3115. J. Kormendy, R. Bender, D. Richstone, E.A. Ajhar et al. *ApJ*, **459**, L57–L60, 1996.
140. On the nature of the faint compact narrow emission-line galaxies: The half-light radius-velocity width diagram. R. Guzman, D.C. Koo, S.M. Faber, G.D. Illingworth et al. *ApJ*, **460**, L5–L9, 1996.
141. *Hubble Space Telescope* observations of globular clusters in M31. I. Color-magnitude diagrams, horizontal branch metallicity dependence, and the distance to M31. E.J. Ajhar, C.J. Grillmair, T.R. Lauer, W.A. Baum et al. *AJ*, **111**, 1110–1127, 1996.

142. Conference summary: Glimpse of a new future. S.M. Faber. In: *New Light on Galaxy Evolution, IAU Symposium No. 171*, eds. R. Bender and R.L. Davies (Dordrecht: Kluwer), 313–317, 1996.
143. The centers of early-type galaxies with *HST*. II. Empirical models and structure parameters. Y.I. Byun, C.J. Grillmair, S.M. Faber, E.A. Ajhar et al. *AJ*, **111**, 1889–1900, 1996.
144. *Hubble Space Telescope* WFPC2 imaging of M16: Photoevaporation and emerging young stellar objects. J.J. Hester, P.A. Scowen, R. Sankrit, T.R. Lauer et al. *AJ*, **111**, 2349–2360 and 2526–2533, 1996.
145. *Hubble Space Telescope* Planetary Camera images of NGC 1316 (Fornax A). E.J. Shaya, D.M. Dowling, D.G. Currie, S.M. Faber et al. *AJ*, **111**, 2212–2223 and 2515–2516, 1996.
146. *Hubble Space Telescope* observations of globular clusters in M31. II. Structural parameters. C.J. Grillmair, E.A. Ajhar, S.M. Faber, W.A. Baum et al. *AJ*, **111**, 2293–2302, 1996.
147. Optical rotation curves of distant field galaxies: Keck results at redshifts  $z \sim 1$ . N.P. Vogt, D.A. Forbes, A.C. Phillips, C. Gronwall et al. *ApJ*, **465**, L15–L18, 1996.
148. The centers of early-type galaxies with *HST*. III. Non-parametric recovery of stellar luminosity distributions. K. Gebhardt, D. Richstone, E.A. Ajhar, T.R. Lauer et al. *AJ*, **112**, 105–113, 1996.
149. Redshift  $z \sim 1$  galaxies observed with the Keck Telescope and the *Hubble Space Telescope*. D.N.C. Koo, N.P. Vogt, A.C. Phillips, R. Guzman et al. *ApJ*, **469**, 535–541, 1996.
150. *Hubble Space Telescope* observations of M32: The color-magnitude diagram. C.J. Grillmair, T.R. Lauer, G. Worthey, S.M. Faber et al. *AJ*, **112**, 1975–1987 and 2380–2381, 1996.
151. *Hubble Space Telescope* observations of the double nucleus of NGC 4486b. T.R. Lauer, S. Tremaine, E.A. Ajhar, R. Bender et al. *ApJ*, **471**, L79–L82, 1996.
152. *Hubble Space Telescope* spectroscopic evidence for a  $10^9 M_{\odot}$  black hole in NGC 4594. J. Kormendy, R. Bender, E.A. Ajhar, A. Dressler et al. *ApJ*, **473**, L91–L94, 1996.
153. An *HST* survey of cores of early-type galaxies. J. Kormendy, Y. Byun, E.A. Ajhar, J.R. Lauer, A. Dressler et al. In: *New Light on Galaxy Evolution, IAU Symposium No. 171*, eds. R. Bender and R.L. Davies (Dordrecht: Kluwer), 105–116, 1996.
154. The galaxy populations of clusters at high redshift: A Hubble atlas. S.C. Trager, S.M. Faber and A. Dressler. In: *New Light on Galaxy Evolution, IAU Symposium No. 171*, eds. R. Bender and R. Davies (Dordrecht: Kluwer), 455, 1996.
155. The centers of galaxies. D. Richstone, K. Gebhardt, A. Dressler, S.M. Faber, C. Grillmair et al. In: *Dynamical Evolution of the Star Clusters: Confirmation of Theory and Observations, IAU Symposium No. 174*, eds. P. Hut and J. Makino (Dordrecht: Kluwer), 53–60, 1996.
156. Optical rotation curves of distant field galaxies: Sub- $L^*$  systems. N.P. Vogt, A.C. Phillips, S.M. Faber, J. Gallego et al. *ApJ*, **479**, L121–L124, 1997.
157. Keck spectroscopy of redshift  $z \sim 3$  galaxies in the Hubble Deep Field. J.D. Lowenthal, D.N.C. Koo, S.M. Faber, R. Guzman, J. Gallego et al. *ApJ*, **481**, 673–678, 1997.

158. Spectroscopic evidence for a supermassive black hole in NGC 4486b. J. Kormendy, R. Bender, S.M. Faber, J. Magorrian, S. Tremaine et al. *ApJ*, **482**, L139–L142, 1997.
159. Homogeneous velocity-distance data for peculiar velocity analysis. III. The Mark III catalog of galaxy peculiar velocities. J.A. Willick, S. Courteau, S.M. Faber, D. Burstein et al. *ApJS*, **109**, 333–366, 1997. Also published as: Mark III catalog of galaxy peculiar velocities (Willick+ 1997), *VizieR Online Data Catalog*, **7198**, 1996.
160. Distance to the Coma Cluster and a value for  $H_0$  inferred from globular clusters in IC 4051. W.A. Baum, S.M. Faber, M. Hammergren, B. Thomsen, E.J. Groth et al. *AJ*, **113**, 1483–1494, 1997.
161. The nuclear region of M51 imaged with the *HST* Planetary Camera. C.J. Grillmair, S.M. Faber, T.R. Lauer, J.J. Hester et al. *AJ*, **113**, 225–230, 1997.
162. Tests of morphological peculiarity indices for distant and local galaxies. K.L. Wu, S.M. Faber and T.R. Lauer. In: *The Hubble Space Telescope and the High Redshift Universe*, Proceedings of the 37th Herstmonceux Conference, held at Cambridge, UK, 1–5 July 1996, eds. N.R. Tanvir, A. Aragon-Salamanca and J.V. Wall (Singapore: World Scientific), 179–180, 1997.
163. Keck spectroscopy of the Hubble Deep Field. G.D. Illingworth, J. Gallego, R. Guzmán, J.D. Lowenthal, A.C. Phillips, N.P. Vogt, D.C. Koo and S.M. Faber. In: *The Hubble Space Telescope and the High Redshift Universe*, Proceedings of the 37th Herstmonceux conference, held at Cambridge, UK, 1–5 July 1996, eds. N.R. Tanvir, A. Aragon-Salamanca and J.V. Wall (Singapore: World Scientific), 37–42, 1997.
164. Malmquist bias and the distance to the Virgo Cluster. A.H. Gonzalez and S.M. Faber. *ApJ*, **485**, 80–86, 1997.
165. Galaxies at  $z \sim 4$  and the formation of Population II. S.C. Trager, S.M. Faber, A. Dressler and A. Oemler. *ApJ*, **485**, 92–99, 1997.
166. The centers of early-type galaxies with *HST*. IV. Central parameter relations. S.M. Faber, S. Tremaine, E.A. Ajhar, Y.I. Byun et al. *AJ*, **114**, 1771–1796, 1997.
167. Global relationships among the physical properties of stellar systems. D. Burstein, R. Bender, S.M. Faber and R. Nolthenius. *AJ*, **114**, 1365–1392, 1997.
168. The nature of compact galaxies in the Hubble Deep Field. I. Global properties. A.C. Phillips, R. Guzman, J. Gallego, D.C. Koo et al. *ApJ*, **489**, 543–558, 1997.
169. *Hubble Space Telescope* observations of M32. C.J. Grillmair, T.R. Lauer, G. Worthey, S.M. Faber, W.L. Freedman et al. In: *The Nature of Elliptical Galaxies, ASP Conference Series, Vol. 116*, eds. M. Araboldi, G.S. da Costa and P. Saha (San Francisco: Astronomical Society of the Pacific), 308–309, 1997.
170. The central structure of early-type galaxies. T.R. Lauer, S.M. Faber, S. Tremaine, E.A. Ajhar, Y.-I. Byun et al. In: *The Nature of Elliptical Galaxies, ASP Conference Series, Vol. 116*, eds. M. Arnaboldi, G.S. de Costa and P. Saha (San Francisco: Astronomical Society of the Pacific), 113–122, 1997.
171. The fundamental plane and Tully-Fisher relations in kappa-space. R. Bender, D. Burstein and S.M. Faber. In: *Galaxy Scaling Relations: Origins, Evolution and Applications*, eds. L.N. da Costa and A. Renzini (New York: Springer), 95–102, 1997.

172. The nature of compact galaxies in the Hubble Deep Field. II. Spectroscopic properties and implications for the evolution of the star formation rate density of the Universe. R. Guzman, J. Gallego, D.C. Koo, A.C. Phillips et al. *ApJ*, **489**, 559–572, 1997.
173. Erratum: The nuclear region of M51 imaged with the *HST* Planetary Camera. C.J. Grillmair, S.M. Faber, T.R. Lauer, J.J. Hester, R. Lynds, E.J. O'Neil Jr. and P.A. Scowen. *AJ*, **116**, 547, 1998.
174. Old stellar populations. VI. Absorption-line spectra of galaxy nuclei and globular clusters. S.C. Trager, G. Worthey, S.M. Faber, D. Burstein and J.J. Gonzalez. *ApJS*, **116**, 1–28, 1998. Also published as: Old stellar populations. VI. Absorption-line spectra of galaxy nuclei and globular clusters (Trager+ 1998), *VizieR Online Data Catalog*, **211**, 1998.
175. Interpreting high-redshift galaxies in the HDF. R.S. Somerville, J.R. Primack and S.M. Faber. In: *The Evolving Universe, Selected Topics on Large-Scale Structure and the Properties of Galaxies*, Based on a workshop held at Schloss Ringberg, Tegernsee, Germany, 23–28 September 1996, *Astrophysics and space science library (ASSL) Series Vol. 231*, ed. D. Hamilton (Dordrecht: Kluwer Academic Publishers), 333–338, 1998.
176. The nature of high-redshift galaxies. J.R. Primack, R.S. Somerville, S.M. Faber and R.H. Wechsler. *Physics Reports*, **307**, 15–22, 1998.
177. The DEIMOS spectrograph and a planned DEEP redshift survey on the Keck II telescope. M. Davis and S.M. Faber. In: *Wide Field Surveys in Cosmology*, eds. S. Colombi, Y. Mellier and B. Raban (Paris: Editions Frontières), 333–338, 1998.
178. M32 ± 1. T.R. Lauer, S.M. Faber, E.A. Ajhar, C.J. Grillmair et al. *AJ*, **116**, 2263–2286, 1998.
179. Supermassive black holes and the evolution of galaxies. D. Richstone, E.A. Ajhar, R. Bender, G. Bower, S.M. Faber et al. *Nature*, **395**, A14–A19, 1998.
180. The demography of massive dark objects in galaxy centers. J. Magorrian, S. Tremaine, D. Richstone, R. Bender, S.M. Faber et al. *AJ*, **115**, 2285–2305, 1998.
181. The demography of massive galactic black holes. S.M. Faber. In: *Advances in Space Research: Proceedings of the Kyoto COSPAR Meeting*, eds. H. Schmitt, A. Kinney and L. Ho, **23**, Issue 5–6, 925–936, 1999.
182. POTENT reconstruction from Mark III velocities. A. Dekel, A. Eldar, T. Kolatt, A. Yahil et al. *ApJ*, **522**, 1–38, 1999.
183. The magnitude-size relation of galaxies out to  $z \sim 1$ . L. Simard, D.N.C. Koo, S.M. Faber et al. *ApJ*, **519**, 563–579, 1999.
185. Young galaxies: What turns them on? T.S. Kolatt, J.S. Bullock, R.S. Somerville, Y. Sigad, P. Jonsson, A.V. Kravtsov, A.A. Klypin, J.R. Primack, S.M. Faber and A. Dekel. *ApJ*, **523**, L109–L112, 1999.
186. The stellar ages of elliptical galaxies. S.M. Faber, S.C. Trager, J.J. Gonzalez and G. Worthey. *Astrophysics and Space Science*, **267**, 273–281, 1999.
187. Black holes in galaxy centers. S.M. Faber. In: *Formation of Structure in the Universe*, eds. A. Dekel and J. Ostriker (Cambridge: Cambridge University Press), 337–359, 1999.

188. Axisymmetric, three-integral models of galaxies: A massive black hole in NGC 3379. K. Gebhardt, D. Richstone, J. Kormendy, T.R. Lauer, E.A. Ajhar, R. Bender, A. Dressler, S.M. Faber et al. *AJ*, **119**, 1157–1171, 2000.
189. The stellar population histories of local early-type galaxies. I. Stellar population parameters. S.C. Trager, S.M. Faber, G. Worthey and J.J. Gonzalez. *AJ*, **119**, 1645–1676, 2000.
190. The stellar population histories of local early-type galaxies. II. Controlling parameters of stellar populations. S.C. Trager, S.M. Faber, G. Worthey and J.J. Gonzalez. *AJ*, **120**, 165–188, 2000.
191. Potent reconstruction from Mark III velocities. T. Kolatt, A. Dekel, A. Eldar, A. Yahil, J.A. Willick, S.M. Faber, S. Courteau and D. Burstein. In: *Cosmic Flows Workshop, ASP Conference Series Vol. 201*, eds. S. Courteau and J. Willick (San Francisco: Astronomical Society of the Pacific), 205–214, 2000.
192. A relationship between nuclear black hole mass and galaxy velocity dispersion. K. Gebhardt, R. Bender, G. Bower, A. Dressler, S.M. Faber, A.V. Filippenko, R. Green, C. Grillmair, L.C. Ho, J. Kormendy, T.R. Lauer, J. Magorrian, J. Pinkney, D. Richstone and S. Tremaine. *ApJ*, **539**, L13–L16, 2000.
193. Black hole mass estimates from reverberation mapping and from spatially resolved kinematics. K. Gebhardt, J. Kormendy, L.C. Ho, R. Bender, G. Bower, A. Dressler, S.M. Faber, A.V. Filippenko, R. Green, C. Grillmair, T.R. Lauer, J. Magorrian, J. Pinkney, D. Richstone and S. Tremaine. *ApJ*, **543**, L5–L8, 2000.
194. The nature of high- $z$  galaxies. R.S. Somerville, J.R. Primack and S.M. Faber. *MNRAS*, **320**, 504–528, 2001.
195. Erratum: A relationship between nuclear black hole mass and galaxy velocity dispersion. K. Gebhardt, R. Bender, G. Bower, A. Dressler, S.M. Faber, A.V. Filippenko, R. Green, C. Grillmair, L.C. Ho, J. Kormendy, T.R. Lauer, J. Magorrian, J. Pinkney, D. Richstone and S. Tremaine. *ApJ*, **555**, L75, 2001.
196. The Big Bang as scientific fact. S.M. Faber. In: *Cosmic Questions*, Proceedings from a conference entitled Cosmic Questions, sponsored by the AAAS Program of Dialogue on Science, Ethics and Religion, held April 14–16, 1999 in Washington, DC, ed. J.B. Miller (New York: The New York Academy of Sciences), 39–53, 2001.
197. The evolution of disk structural parameters to  $z \sim 1$ . S.M. Faber, A.C. Phillips, L. Simard, N.P. Vogt and R.S. Somerville. In: *Galaxy Disks and Disk Galaxies, ASP Conference Series Vol. 230*, eds. J.G. Funes and E.M. Corsini (San Francisco: Astronomical Society of the Pacific), 517–526, 2001.
198. The formation time scales of giant spheroids. S.C. Trager, S.M. Faber and A. Dressler. In: *Astrophysical Ages and Timescales, ASP Conference Series Vol. 245*, eds. T. von Hippel, C. Simpson and N. Manset (San Francisco: Astronomical Society of the Pacific), 429–436, 2001.
199. The DEEP 2 Redshift Survey. M. Davis, J.A. Newman, S.M. Faber and A.C. Phillips. In: *Deep Fields*, Proceedings of the ESO/ECF/STScI Workshop held at Garching, Germany, 9–12 October 2000, eds. S. Cristiani, A. Renzini and R. Williams (New York: Springer), 241–246, 2001.

200. A quantitative study of the evolution of peculiarities in galaxy morphology. K.L. Wu, S.M. Faber and T.R. Lauer. In: *Deep Fields*, Proceedings of the ESO/ECF/STScI Workshop held at Garching, Germany, 9–12 October 2000, eds. S. Cristiani, A. Renzini and R. Williams (New York: Springer), 170–172, 2001.
201. Are there blue, massive E/S0 galaxies at  $z \sim 1$ ? Kinematics of blue spheroidal galaxy candidates. M. Im, S.M. Faber, K. Gebhardt, D.N.C. Koo, A.C. Phillips et al. *AJ*, **122**, 750–763, 2001.
202. The slope of the black-hole mass versus velocity-dispersion correlation. S.D. Tremaine, K. Gebhardt, R. Bender, G. Bower, A. Dressler, S.M. Faber, A.V. Filippenko, R. Green, C. Grillmair, L.C. Ho, J. Kormendy, T.R. Lauer, J. Magorrian, J. Pinkney and D. Richstone. *ApJ*, **574**, 740–753, 2002.
203. The DEEP Groth Strip Survey. X. Number density and luminosity function of field E/S0 galaxies at  $z < 1$ . M. Im, L. Simard, S.M. Faber, D.C. Koo, K. Gebhardt, C.N.A. Willmer, A.C. Phillips, G. Illingworth, N.P. Vogt and V.L. Sarajedini. *ApJ*, **571**, 136–171, 2002.
204. The DEEP Groth Strip Survey. II. *Hubble Space Telescope* structural parameters of galaxies in the Groth Strip. L. Simard, C.N.A. Willmer, N.P. Vogt, V.L. Sarajedini, A.C. Phillips, B.J. Weiner, D.C. Koo, M. Im, G.D. Illingworth and S.M. Faber. *ApJS*, **142**, 1–33, 2002. Also published as: The DEEP Groth Strip Survey. II. *Hubble Space Telescope* structural parameters of galaxies in the Groth Strip (Simard+ 2002), *VizieR Online Data Catalog*, **214**, 2002.
205. Galaxies with a central minimum in stellar luminosity density. T.R. Lauer, K. Gebhardt, D. Richstone, S. Tremaine, R. Bender et al. *AJ*, **124**, 1975–1987, 2002.
206. Characterizing the adaptive optics off-axis point-spread function. I. A semiempirical method for use in natural guide star observations. E. Steinbring, S.M. Faber, S. Hinkley, B.A. Macintosh, D. Gavel et al. *PASP*, **114**, 1267–1280, 2002.
207. Testing population synthesis models with the aid of globular cluster CMDs and spectra. R.P. Schiavon, S.M. Faber, J.A. Rose and B.V. Castilho. In: *Observed HR Diagrams and Stellar Evolution*, *ASP Conference Series*, Vol. 274, eds. T. Lejeune and J. Fernandes (San Francisco: Astronomical Society of the Pacific), 573–580, 2002.
208. Population synthesis in the blue and the spectroscopic age of 47 Tucanae. R.P. Schiavon, S.M. Faber and J.A. Rose. In: *New Quests in Stellar Astrophysics: The Link Between Stars and Cosmology*, *Astrophysics and Space Science Library*, Vol. 274, Proceedings of the international conference held in Puerto Vallarta, México, 26–30 March 2001, eds. M. Chavez, A. Bressan, A. Buzzoni and D. Mayya (Dordrecht: Kluwer), 181–184, 2002.
209. Population synthesis in the blue. I. Synthesis of the integrated spectrum of 47 Tucanae from its color-magnitude diagram. R.P. Schiavon, S.M. Faber, B.V. Castilho and J.A. Rose. *ApJ*, **580**, 850–872, 2002.
210. Population synthesis in the blue. II. The spectroscopic age of 47 Tucanae. R.P. Schiavon, S.M. Faber, J.A. Rose and B.V. Castilho. *ApJ*, **580**, 873–886, 2002.
211. A quantitative study of the evolution of peculiarities in galaxy morphology out to  $z \sim 3$ . K.L. Wu, S.M. Faber and T.R. Lauer. *Revista Mexicana de Astronomía y Astrofísica (Serie de Conferencias)*, **17**, 241, 2003.

212. The DEEP Groth Strip Survey. IX. Evolution of the fundamental plane of field galaxies. K. Gebhardt, S.M. Faber, D.C. Koo, M. Im, L. Simard, G.D. Illingworth, A.C. Phillips, V.L. Sarajedini, N.P. Vogt, B. Weiner and C.N.A. Willmer. *ApJ*, **597**, 239–262, 2003.
213. The DEEP Groth Strip Survey. VII. The metallicity of field galaxies at  $0.26 < z < 0.82$  and the evolution of the luminosity-metallicity relation. H.A. Kobulnicky, C.N.A. Willmer, A.C. Phillips, D.C. Koo, S.M. Faber, B.J. Weiner, V.L. Sarajedini, L. Simard and N.P. Vogt. *ApJ*, **599**, 1006–1030, 2003.
214. The DEEP2 Galaxy Redshift Survey: Spectral classification of galaxies at  $z \sim 1$ . D.S. Madgwick, A.L. Coil, C.J. Conselice, M.C. Cooper, M. Davis, R.S. Ellis, S.M. Faber, D.P. Finkbeiner, B. Gerke, P. Guhathakurta, N. Kaiser, D.C. Koo, J.A. Newman, A.C. Phillips, C.C. Steidel, B.J. Weiner, C.N.A. Willmer and R. Yan. *ApJ*, **599**, 997–1005, 2003.
215. Kinematics of 10 early-type galaxies from *Hubble Space Telescope* and ground-based spectroscopy. J. Pinkney, K. Gebhardt, R. Bender, G. Bower, A. Dressler, S.M. Faber, A.V. Filippenko, R. Green, L.C. Ho, J. Kormendy, T.R. Lauer, J. Magorrian, D. Richstone and S. Tremaine. *ApJ*, **596**, 903–929, 2003.
216. Axisymmetric dynamical models of the central regions of galaxies. K. Gebhardt, D. Richstone, S. Tremaine, T.R. Lauer, R. Bender, G. Bower, A. Dressler, S.M. Faber, A.V. Filippenko, R. Green, C. Grillmair, L.C. Ho, J. Kormendy, J. Magorrian and J. Pinkney. *ApJ*, **583**, 92–115, 2003.
217. Erratum: “The DEEP Groth Strip Survey. VII. The metallicity of field galaxies at  $0.26 < z < 0.82$  and the evolution of the luminosity-metallicity relation.” H.A. Kobulnicky, C.N.A. Willmer, A.C. Phillips, D.C. Koo, S.M. Faber, B.J. Weiner, V.L. Sarajedini, L. Simard and N.P. Vogt. *ApJ*, **610**, 1234–1237, 2004.
218. The DEEP2 Galaxy Redshift Survey: Clustering of galaxies in early data. A.L. Coil, M. Davis, D.S. Madgwick, J.A. Newman, C.J. Conselice, M. Cooper, R.S. Ellis, S.M. Faber, D.P. Finkbeiner, P. Guhathakurta, N. Kaiser, D.C. Koo, A.C. Phillips, C.C. Steidel, B.J. Weiner, C.N.A. Willmer and R. Yan. *ApJ*, **609**, 525–538, 2004.
219. Conference summary: Observational cosmology. S.M. Faber. In: *Measuring and Modeling the Universe, Carnegie Observatories Astrophysics Series, Vol. 2, Carnegie Observatories Centennial Symposia*, ed. W.L. Freedman (Cambridge: Cambridge University Press), 371–378, 2004.
220. Keck adaptive optics imaging of  $0.5 < z < 1$  field galaxies from the *Hubble Space Telescope* archive. E. Steinbring, A.J. Metevier, S.A. Norton, L.M. Raschke, D.C. Koo, S.M. Faber, C.N.A. Willmer, J.E. Larkin and T.M. Glassman. *ApJS*, **155**, 15–25, 2004.
221. The Team Keck Treasury Redshift Survey of the GOODS–North Field. G.D. Wirth, C.N.A. Willmer, P. Amico, F.H. Chaffee, R.W. Goodrich, S. Kwok, J.E. Lyke, J.A. Mader, H.D. Tran, A.J. Barger, L.L. Cowie, P. Capak, A.L. Coil, M.C. Cooper, A. Conrad, M. Davis, S.M. Faber, E.M. Hu, D.C. Koo, D. Le Mignant, J.A. Newman and A. Songaila. *AJ*, **127**, 3121–3136, 2004.

222. The DEEP2 Galaxy Redshift Survey: Evolution of close galaxy pairs and major-merger rates up to  $z \sim 1.2$ . L. Lin, D.C. Koo, C.N.A. Willmer, D.R. Patton, C.J. Conselice, R. Yan, A.L. Coil, M.C. Cooper, M. Davis, S.M. Faber, B.F. Gerke, P. Guhathakurta and J.A. Newman. *ApJ*, **617**, L9–L12, 2004.
223. The DEEP Groth Strip Survey. VIII. The evolution of luminous field bulges at redshift  $z \sim 1$ . D.C. Koo, L. Simard, C.N.A. Willmer, K. Gebhardt, R.J. Bouwens, G. Kauffmann, T. Crosby, S.M. Faber, J. Harker, V.L. Sarajedini, N.P. Vogt, B.J. Weiner, A.J. Phillips, M. Im and K.L. Wu. *ApJS*, **157**, 175–217, 2005. Also published as: DEEP Groth Strip Survey. VIII. (Koo+, 2005). *VizieR Online Data Catalog*, **JApJS/157/175**, 2005.
224. The DEEP Groth Strip Galaxy Redshift Survey. III. Redshift catalog and properties of galaxies. B.J. Weiner, A.C. Phillips, S.M. Faber, C.N.A. Willmer, N.P. Vogt, L. Simard, K. Gebhardt, M. Im, D.C. Koo, V.L. Sarajedini, K.L. Wu, D.A. Forbes, C. Gronwall, E.J. Groth, G.D. Illingworth, R.G. Kron, J. Rhodes, A.S. Szalay and M. Takamiya. *ApJ*, **620**, 595–617, 2005.
225. The DEEP2 Galaxy Redshift Survey: Probing the evolution of dark matter halos around isolated galaxies from  $z \sim 1$  to  $z \sim 0$ . C. Conroy, J.A. Newman, M. Davis, A.L. Coil, R. Yan, M.C. Cooper, B.F. Gerke, S.M. Faber and D.C. Koo. *ApJ*, **635**, 982–989, 2005.
226. Hot stars in old stellar populations: a continuing need for intermediate ages. S.C. Trager, G. Worthey, S.M. Faber and A. Dressler. *MNRAS*, **362**, 2–8, 2005.
227. Characterizing the adaptive optics off-axis point-spread function. II. Methods for use in laser guide star observations. E. Steinbring, S.M. Faber, B.A. Macintosh, D. Gavel and E.L. Gates. *PASP*, **117**, 847–859, 2005.
228. The DEEP Groth Strip Survey. I. The sample. N.P. Vogt, D.C. Koo, A.C. Phillips, K. Wu, S.M. Faber, C.N.A. Willmer, L. Simard, B.J. Weiner, G.D. Illingworth, K. Gebhardt, C. Gronwall, R. Guzmán, M. Im, V. Sarajedini, E.J. Groth, J. Rhodes, R. Brunner, A. Connolly, A. Szalay, R. Kron and R. Blandford. *ApJS*, **159**, 41–59, 2005.
229. The DEEP2 Galaxy Redshift Survey: First results on galaxy groups. B.F. Gerke, J.A. Newman, M. Davis, C. Marinoni, R. Yan, A.L. Coil, C. Conroy, M.C. Cooper, S.M. Faber, D.P. Finkbeiner, P. Guhathakurta, N. Kaiser, D.C. Koo, A.C. Phillips, B.J. Weiner and C.N.A. Willmer. *ApJ*, **625**, 6–22, 2005.
230. The centers of early-type galaxies with *Hubble Space Telescope*. V. New WFPC2 photometry. T.R. Lauer, S.M. Faber, K. Gebhardt, D. Richstone, S. Tremaine, E.A. Ajhar, M.C. Aller, R. Bender, A. Dressler, A.V. Filippenko, R. Green, C.J. Grillmair, L.C. Ho, J. Kormendy, J. Magorrian, J. Pinkney and C. Siopis. *AJ*, **129**, 2138–2185, 2005.

### ABSTRACTS AND POSTER PAPERS

1. 10-color photometry of elliptical galaxies and globular clusters. S.M. Faber. *BAAS*, **4**, 224, 1973.
2. New H I upper limits for E and S0 galaxies: Observations. S.M. Faber and J.S. Gallagher. *BAAS*, **6**, 332, 1974.

3. New H I upper limits for E and S0 galaxies: Implications for the origin of the Hubble sequence. S.M. Faber and J.S. Gallagher. *BAAS*, **6**, 332, 1974.
4. Invited lecture: Recent developments in the formation and evolution of galaxies. S.M. Faber. *BAAS*, **7**, 395, 1975.
5. The stellar populations in the semi-stellar nuclei of M31 and M32. S.M. Faber and H.B. French. *BAAS*, **10**, 691, 1978.
6. Anomalously strong H $\beta$  absorption in the spectra of M31 globular clusters. S.M. Faber, C.M. Gaskell and D. Burstein. *BAAS*, **11**, 431, 1979.
7. The relationships between absolute magnitude, axial ratio, (Fe/H), and velocity dispersions for elliptical galaxies. R. Terlevich, R.L. Davies, S.M. Faber and D. Burstein. *BAAS*, **11**, 676, 1980.
8. A metallicity calibration of absorption-line strengths in K giant stars. S.M. Faber, E.D. Friel and D. Burstein. *BAAS*, **13**, 885, 1981. (N144)
9. High dispersion spectra of SMR K giant stars. S.M. Faber, D. Burstein and H.E. Bond. *BAAS*, **15**, 496, 1983.
10. High-resolution line-strengths of SMR K giants. D. Burstein, H.E. Bond and S.M. Faber. *BAAS*, **15**, 966, 1983.
11. The current status of the UC 10-meter telescope project. J.E. Nelson and S.M. Faber. *BAAS*, **15**, 1003, 1983.
12. AM. 06 an astrometry satellite. D.G. York, B. Jones, S. Faber, D. Lin, W. van Altena, P. Demarque, J. Hughes, K. Johnston and A. Bunner. *BAAS*, **16**, 775, 1984.
13. The metallicities of M5, M67, and M71 as determined from K giant spectra. D. Burstein, S.M. Faber, J.J. Gonzalez and A. Spaenhauer. *BAAS*, **16**, 968, 1984.
14. Heineman Prize lecture: Galaxies and the universe. S.M. Faber. *BAAS*, **17**, 874, 1985.
15. An astrometry explorer. D. York, B. Jones, P. Demarque, S.M. Faber, J. Hughes, K. Johnson, D. Lin, P. Silvergate and W. van Altena. *BAAS*, **18**, 1012, 1986.
16. Analysis of bulk motion from a large sample of spiral galaxies. S. Courteau and S.M. Faber. *PASP*, **100**, 1219, 1988.
17. Residual motions of ellipticals in the "Great Attractor" flow field. R. Nolthenius and S.M. Faber. *PASP*, **100**, 1223, 1988.
18. New measurements of distances to spirals in the Great Attractor: Further confirmation of the Large-Scale Flow. A. Dressler and S.M. Faber. *BAAS*, **21**, 1140, 1989.
19. *Hubble Space Telescope* WF/PC images of 30 Doradus. B.G. Campbell, D.A. Hunter, J.A. Holtzman, T.R. Lauer, R.M. Light, S.M. Faber and members of the WFPC Team. *BAAS*, **22**, 1276, 1990.
20. *HST* WF/PC observations of M42. R.M. Light, J.A. Westphal, J.J. Hester and members of the WFPC Team. *BAAS*, **22**, 1277, 1990.
21. *Hubble Space Telescope* Wide Field/Planetary Camera images of the M15 core. S.M. Faber, T.R. Lauer, J. A. Holtzman and members of the WFPC Team. *BAAS*, **22**, 1278, 1990.

22. Stellar photometry with the *Hubble Space Telescope* Wide Field/Planetary Camera: A progress report. J.A. Holtzman, E.J. Groth, R.M. Light, S.M. Faber and members of the WFPC Team. *BAAS*, **22**, 1278, 1990.
23. NGC 1068: Resolution of nuclear structure in the optical continuum. C.R. Lynds, S.M. Faber and members of the WFPC Team. *BAAS*, **22**, 1279, 1990.
24. The core of the nearby S0 galaxy NGC 7457 imaged with the *HST* Planetary Camera. T.R. Lauer, S.M. Faber and members of the WFPC Team. *BAAS*, **22**, 1279, 1990.
25. The Imaging Performance of the *Hubble Space Telescope*. C. Burrows, P.Y. Bely, J.A. Holtzman, S.M. Faber, H. Hasan, C.R. Lynds and D. Schroeder. *BAAS*, **23**, 832, 1991.
26. Planetary camera observations of NGC 1275. J.A. Holtzman, S.M. Faber and members of the WFPC Team. *BAAS*, **23**, 1473, 1991.
27. Planetary camera observations of the M87 stellar cusp. T.R. Lauer, C.R. Lynds, S.M. Faber and members of the WFPC Team. *BAAS*, **23**, 1463, 1991.
28. The controlling parameters of the integrated flux of a stellar population. G. Worthey and S.M. Faber. *BAAS*, **24**, 1255, 1992.
29. The  $H_0$  Key Project: Photometry of WFC images of M81. S.M.G. Hughes, B.F. Madore, J.R. Mould, S.M. Faber, G.D. Illingworth, W.L. Freedman, R. Hill, M.G. Lee, L. Ferrarese, H.C. Ford, J.A. Graham, J.E. Gunn, J.G. Hoessel, J.P. Huchra, R.C. Kennicutt, A. Turner and P.B. Stetson. *BAAS*, **25**, 793, 1993.
30. *HST* Observations of Cepheids in M81: Dealing with extinction. B.F. Madore, W.L. Freedman, M.G. Lee, R. Hill, R.C. Kennicutt, A. Turner, J. Mould, S. Hughes, P. Stetson, H. Ford, L. Ferrarese, J.G. Hoessel, G.D. Illingworth, S. Faber, J. Huchra, J.A. Graham, A. Saha and J. Gunn. *BAAS*, **25**, 797, 1993.
31. *HST* planetary camera observations of Fornax A. D.M. Dowling, E.J. Shaya, E.A. Ajhar, T.R. Lauer and S.M. Faber. *BAAS*, **25**, 800, 1993.
32. An *HST* determination of the distance to M81. W.L. Freedman, M.G. Lee, R. Hill, S.M. Hughes, B.F. Madore, J.R. Mould, P. Stetson, R.C. Kennicutt, A. Turner, L. Ferrarese, H. Ford, J.A. Graham, J.G. Hoessel, S. Faber, G.D. Illingworth, J. Huchra and J. Gunn. *BAAS*, **25**, 914, 1993.
33. The *Hubble Space Telescope* Key Project to measure  $H_0$ . J.R. Mould, S.M. Hughes, B.F. Madore, S.M. Faber, G.D. Illingworth, W.L. Freedman, M.G. Lee, R. Hill, L. Ferrarese, H.C. Ford, J.A. Graham, J.E. Gunn, J.G. Hoessel, J.P. Huchra, R.C. Kennicutt, A. Turner and P.B. Stetson. *BAAS*, **25**, 915, 1993.
34. The nuclear regions of NGC 3311 and NGC 7768 imaged with the *HST* Planetary Camera. C.J. Grillmair, S.M. Faber and T.R. Lauer. *BAAS*, **25**, 1343, 1993.
35. Are small ellipticals younger than big ellipticals? S.C. Trager, S.M. Faber, J.J. Gonzalez and G. Worthey. *BAAS*, **25**, 1354, 1993.
36. Age and metallicity of elliptical galaxies. J.J. Gonzalez, S.M. Faber and G. Worthey. *BAAS*, **25**, 1355, 1993.
37. Invited lecture: Galactic nuclei through the “lens” of *HST*. S.M. Faber. *BAAS*, **24**, 1443, 1993.

38. SBF magnitudes as tools for stellar population studies. G. Worthey and S.M. Faber. *BAAS*, **25**, 1453, 1993.
39. *Hubble Space Telescope* observations of M31 globular clusters. E.A. Ajhar, T.R. Lauer, C.R. Lynds, E.J. O'Neil et al. *BAAS*, **26**, 938, 1994.
40. Planetary Camera imaging of the nucleus of M51. C.J. Grillmair, S.M. Faber, J.J. Hester, P.A. Scowen and T.R. Lauer. *BAAS*, **26**, 890, 1994.
41. Distance to the Coma Cluster. W.A. Baum, M. Hammergren, R.M. Light, S.P. Ewald, E.J. Groth, E.A. Ajhar, T.R. Lauer, C.R. Lynds, E.J. O'Neil, J.A. Holtzman, S.M. Faber and C.J Grillmair. *BAAS*, **26**, 941, 1994.
42. *HST* observations of the galaxy population of a rich cluster at  $z = 0.9$ . S.C. Trager, S.M. Faber, E.J. Groth, J.A. Holtzman, C.R. Lynds and E.J. O'Neil. *BAAS*, **26**, 1403, 1994.
43. Structural parameters of M31 globular clusters from WFPC2 imaging. C.T. Grillmair, S.M. Faber, E.A. Ajhar, T.R. Lauer, C.R. Lynds, E.J. O'Neil, W.A. Baum, J.A. Holtzman and members of the WFPC Team. *BAAS*, **26**, 1434, 1994.
44.  $\Omega$  and biasing from optical galaxies vs. POTENT mass. M.J. Hudson, A. Dekel, S. Courteau, S.M. Faber and J.A. Willick. *BAAS*, **26**, 1517, 1994.
45. Globulars to 27.6 magnitude in the Coma Cluster. W.A. Baum, M. Hammergren, R.M. Light, S.P. Ewald, E.J. Groth, E.A. Ajhar, T.R. Lauer, C.R. Lynds, E.J. O'Neil, J.A. Holtzman, S.M. Faber and C.J Grillmair. *BAAS*, **26**, 1398, 1994.
46. Deep Keck Redshift Survey of field galaxies imaged by the *HST*. R. Guzman, D.C. Koo, N.P. Vogt, A.C. Phillips, K.L. Wu, S.M. Faber, C. Gronwell, D.A. Forbes and G.D. Illingworth. *BAAS*, **27**, 1355, 1995.
47. Globular clusters in the Coma elliptical IC 4051. W.A. Baum, M. Hammergren, E.J. Groth, S.M. Faber, C.J. Grillmair, E.A. Ajhar and members of the WFPC Team. *BAAS*, **27**, 1407, 1995.
48. Morphological peculiarity indices of distant and nearby galaxies. K.L. Wu, S.M. Faber and T.R. Lauer. *BAAS*, **28**, 831, 1996.
49. *Hubble Space Telescope* observations of M32: The color-magnitude diagram. C.J. Grillmair, T.R. Lauer, G. Worthey, S.M. Faber, W.L. Freedman, B.F. Madore, E.A. Ajhar, J.A. Holtzman, P.B. Stetson and members of the WFPC Team. *BAAS*, **28**, 840, 1996.
50. Distance to the Coma Cluster and a value for  $H_0$ . W.A. Baum, M. Hammergren, B. Thomsen, E.J. Groth, S.M. Faber, C.J. Grillmair and E.A. Ajhar. *BAAS*, **28**, 1288, 1996.
51. Morphological peculiarity indices for distant and local galaxies. K.L. Wu, S.M. Faber and T.R. Lauer. *BAAS*, **28**, 1412, 1996.
52. Compact galaxies in the Hubble Deep Field. A.C. Phillips, R. Guzman, J. Gallego, J.D. Lowenthal, N.P. Vogt, D. Koo, S.M. Faber and G. Illingworth. *BAAS*, **28**, 1413, 1996.
53. Optical rotation curves of distant field galaxies: Kinematics and evolution out to  $z \sim 1$ . N.P. Vogt, A.C. Phillips, S.M. Faber, G.D. Illingworth and D.C. Koo. *BAAS*, **28**, 1413, 1996.

54. A massive black hole in NGC 3377: 3-integral models. D. Richstone, K. Gebhardt, J. Kormendy, R. Bender, J. Magorrian, S. Tremaine, S.M. Faber and T.R. Lauer. *BAAS*, **28**, 1422, 1996.
55. A massive black hole in NGC 3379: 3-integral models. K. Gebhardt, D. Richstone, J. Kormendy, R. Bender, S.M. Faber, T.R. Lauer, J. Magorrian and S. Tremaine. *BAAS*, **28**, 1422–1423, 1996.
56. The demography of massive central black holes. J. Magorrian, S. Tremaine, K. Gebhardt, D. Richstone and S.M. Faber. *BAAS*, **28**, 1423, 1996.
57. The central structure of early-type galaxies. T.R. Lauer, S.M. Faber, S. Tremaine, J. Kormendy and D. Richstone. *BAAS*, **28**, 1423, 1996.
58. Morphological peculiarities of distant and local galaxies. K.L. Wu, S.M. Faber and T.R. Lauer. *BAAS*, **29**, 1378, 1997.
59. Morphological peculiarity indices of local and distant galaxies. K.L. Wu, S.M. Faber and T.R. Lauer. *BAAS*, **30**, 1246, 1998.
60. Lyman-break galaxies as collisional starbusts. J. Bullock, T. Kolatt, R. Somerville, Y. Sigad, P. Jonsson et al. In: *COSMO–98, Second International Workshop on Particle Physics and the Early Universe, AIP Conference Proceedings, Vol. 478*, ed. D.O. Caldwell (Woodbury, NY: American Institute of Physics), 200, 1999.
61. The maximum asymptotic giant branch luminosity of an old metal-rich stellar population from NICMOS observations of M32. G. Worthey, C.J. Grillmair, T.R. Lauer and S.M. Faber. *BAAS*, **32**, 1592, 2000.
62. A new set of high-resolution models for population synthesis in the blue. R.P. Schiavon and S.M. Faber. *BAAS*, **32**, 1527, 2000.
63. Lick adaptive optics observations of early-type galaxy centers. L.M. Raschke, P. Jonsson, S. Sevenson, S.M. Faber and B.A. Macintosh. *BAAS*, **32**, 1490, 2000.
64. DEIMOS: A powerful new spectrograph at Keck II. A.C. Phillips, S. Faber, R. Kibrick, V. Wallace and the DEIMOS Team. *BAAS*, **34**, 1320, 2002.
65. Anisoplanatism within the isoplanatic patch. J. Christou, E. Steinbring, S.M. Faber, D. Gavel, J. Patience and E. Gates. *BAAS*, **34**, 1257, 2002.
66. A comparison of estimates of the black hole mass in the Maser Galaxy NGC 4258. C. Siopis, M.C. Aller, R. Bender, G. Bower, A. Dressler, S.M. Faber, A.V. Filippenko, K. Gebhardt, R. Green, C. Grillmair, L.C. Ho, J. Kormendy, T.R. Lauer, J. Magorrian, J. Pinkney, D. Richstone and S. Tremaine. *BAAS*, **34**, 1219, 2002.
67. The DEEP Groth Strip Survey. XII. The metallicity of field galaxies at  $z = 0.26–0.82$ . H. Kobulnicky, C.N.A. Willmer, B.J. Weiner, D.C. Koo, A.C. Phillips, S.M. Faber, V.L. Sarajedini, L. Simard and N.P. Vogt. *BAAS*, **34**, 1194, 2002.
68. Team Keck Treasury Redshift Survey. R.W. Goodrich, P. Amico, F. Chaffee, A. Conrad, S. Kwok, D. Le Mignant, J. Lyke, J. Mader, H.D. Tran, G.D. Wirth, C.N.A. Willmer, D.C. Koo, S.M. Faber, M. Davis, L.L. Cowie, A.J. Barger, P. Capak, E. Hu and A. Songaila. *BAAS*, **35**, #119–08, 2003.

69. The Scatter in the  $M_{\text{sigma}}$  relation. C. Siopis, M.C. Aller, R. Bender, G.A. Bower, A. Dressler, S.M. Faber, A.V. Filippenko, K. Gebhardt, R. Green, L.C. Ho, J. Kormendy, T.R. Lauer, J. Magorrian, J. Pinkney, D. Richstone and S. Tremaine. *BAAS*, **36**, #110–11, 2004.
70. On the age estimation of disk galaxies using optical and near-infrared photometry. H.-C. Lee, G. Worthey, S.C. Trager and S.M. Faber. *BAAS*, **37**, #138–10, 2005.
71. Galaxy kinematics in the DEEP2 Survey: Evolution in the Tully-Fisher relation to  $z > 1$ . B.J. Weiner, C.N.A. Willmer, S. Kassin, S.M. Faber and the DEEP2 Collaboration. *BAAS*, **37**, #80–12, 2005.
72. IRAC and K-band colors of galaxies as a function of redshift. S.M. Faber, J.-S. Huang, K.G. Noeske, K. Bundy, DEEP2 Team, IRAC GTO Team and the Palomar K-band Team. *BAAS*, **37**, #80–11, 2005.

### TECHNICAL REPORTS

1. Outdoor lighting and Lick Observatory. S.M. Faber and S. Reed. *Report to the City of San Jose*, January 1980.
2. Comments on the effects of increased diffuse sky brightness on faint object astronomical observations. J.S. Gallagher and S.M. Faber. In: *Workshop on Satellite Power Systems Effect on Optical and Radio Astronomy*, DOE/NASA Conference Series, eds. P.A. Esktron and G.M. Stokes, 7905143, 33–38, 1980. (N101)
3. Comments on the technical report on the conversion of streetlights to sodium vapor. S.M. Faber. In: *Conversion of the City of Sunnyvale Streetlighting System to Sodium Vapor* (Sacramento: California Energy Commission), **Vol. 1**, Appendix I, 1980.
4. The optimum match between image size and the size of detector pixels: The choice of angular scale. S.M. Faber. *TMT Technical Report No. 61*, Lawrence Berkeley Laboratory, 1983.
5. Matching representative instruments and detectors to the Ten-Meter Telescope: Specific examples. S.M. Faber. *TMT Technical Report No. 62*, Lawrence Berkeley Laboratory, 1983.
6. The contribution of focus errors to the optical error budget. S.M. Faber. *TMT Technical Report No. 56*, Lawrence Berkeley Laboratory, 1983.
7. Estimated image diameters at  $10\mu$ . J.E. Nelson and S.M. Faber. *TMT Technical Report No. 57*, Lawrence Berkeley Laboratory, 1983.
8. Formulae relevant to the optical performance. S.M. Faber. *TMT Technical Report No. 55*, Lawrence Berkeley Laboratory, 1983.
9. A summary of UC Ten-Meter Telescope specifications. J.E. Nelson, T. Mast, S.M. Faber and G. Gabor. *TMT Technical Note No. 57*, Lawrence Berkeley Laboratory, 1983.
10. The design of the Keck observatory and telescope (Ten-Meter Telescope). *Keck Observatory Report No. 90*, eds. J.E. Nelson, T. Mast and S.M. Faber, January 1985.

11. Metallicity and the level of the ultraviolet rising branch in elliptical galaxies. S.M. Faber. Final Report, 1 Jul. 1984–31 Mar. 1986, Lick Observatory, Santa Cruz, CA, 1986.
12. Image quality and telescope performance. J. Holtzman, S.M. Faber, M. Davis, K. Ebner and W.L.W. Sargent. *Keck Observatory Report No. 177*, 1988.
13. Report on oxygen testing at Mauna Kea. S.M. Faber, J. Nelson and G. Illingworth. *Keck Observatory Report No. 186*, 1988.
14. Wide-Field Camera science verification report. Ed. S.M. Faber with members of the WFPC Team (Baltimore: Space Telescope Science Institute), 1992.
15. DEIMOS preliminary design report. Members of the DEIMOS Spectrograph Team. Ed. S.M. Faber (Santa Cruz: UCO/Lick Observatory), 1994.
16. DEIMOS critical design report. Members of the DEIMOS Spectrograph Team. Eds. S.M. Faber and D. Cowley (Santa Cruz: UCO/Lick Observatory), 1995.
17. The design and assembly of camera lens cells for fluid couplants using elastomeric lens mounts. S.M. Faber, D. Hilyard, E. James and T. Pfister (Santa Cruz: UCO/Lick Observatory), 1996.
18. DEIMOS camera critical design report. S.M. Faber, T. Mast and D. Cowley (Santa Cruz: UCO/Lick Observatory), 1997.
19. DEIMOS, a wide-field faint-object spectrograph. D.J. Cowley, S.M. Faber, D.F. Hilyard, E. James and J. Osborne. *SPIE*, **2871**, 1107–1115, 1997.
20. Design update of DEIMOS: A wide-field faint-object spectrograph. E.C. James, D.J. Cowley, S.M. Faber, D.F. Hilyard, and J. Osborne. *SPIE*, **3355**, 70–80, 1998.
21. Elastomeric lens mounts. T.S. Mast, P.I. Choi, D.J. Cowley, S.M. Faber, E.C. James and A.A. Shambrook. *SPIE*, **3355**, 144–154, 1998.
22. DEIMOS camera assembly. T. Mast, S.M. Faber, V. Wallace, J. Lewis, and D. Hilyard. *SPIE*, **3786**, 499–505, 1999.
23. Chemical reactivity testing of optical fluids and materials in the DEIMOS spectrographic camera for the Keck II telescope. D.F. Hilyard, G.K. Laopodis and S.M. Faber. *SPIE*, **3786**, 482, 1999.
24. DEIMOS pre-ship report. Members of the DEIMOS spectrograph team. Ed. S.M. Faber (Santa Cruz: UCO/Lick Observatory), 2001.
25. A comparison of open versus closed loop flexure compensation systems for two Keck optical imaging spectrographs: ESI and DEIMOS. R.I. Kibrick, S.M. Faber, A.C. Phillips, M. McVeigh, D. Cowley, M. Radovan, K. Gilmore, C. Wright, D. Tucker, D. Clarke and S. Allen. *SPIE*, **4841**, 1385–1398, 2003.
26. The DEIMOS spectrograph for the Keck II telescope: Integration and testing. S.M. Faber, A.C. Phillips, R.I. Kibrick, B. Alcott, S.L. Allen, J. Burrous, T. Cantrall, D. Clarke, A.L. Coil, D.J. Cowley, M. Davis, W.T.S. Deich, K. Dietsch, D.K. Gilmore, C.A. Harper, D.F. Hilyard, J.P. Lewis, M. McVeigh, J. Newman, J. Osborne, R. Schiavon, R.J. Stover, D. Tucker, V. Wallace, M. Wei, G. Wirth and C.A. Wright. *SPIE*, **4841**, 1657–1669, 2003.
27. Anisoplanatism within the isoplanatic patch. J.C. Christou, E. Steinbring, S.M. Faber, D. Gavel, J. Patience and E. Gates. *SPIE*, **4839**, 846–857, 2003.

28. DEIMOS rotation control system software. W.T.S. Deich, R.I. Kibrick, S.M. Faber, D. Clarke and V. Wallace. *SPIE*, **4848**, 463–473, 2003.
29. Science objectives and early results of the DEEP2 Redshift Survey. M. Davis, S.M. Faber, J. Newman, A.C. Phillips, R.S. Ellis, C.C. Steidel, C. Conselice, A.L. Coil, D.P. Finkbeiner, D.C. Koo, P. Guhathakurta, B. Weiner, R. Schiavon, C. Willmer, N. Kaiser, G.A. Luppino, G. Wirth, A. Connolly, P. Eisenhardt, M. Cooper and B. Gerke. *SPIE*, **4834**, 161–172, 2003.
30. The DEIMOS flexure compensation system: Overview and operational results. R.I. Kibrick, S.L. Allen, D.A. Clarke, S.M. Faber, A.C. Phillips and G.D. Wirth. *SPIE*, **5492**, 799–810, 2004.

## UNIVERSITY SERVICE

### Administrative appointments

2005–2006	Chair, Department of Astronomy and Astrophysics
2005–2006	Chair, Search Committee, UCO/Lick Director
2004	Member, UC Provost's Faculty Search Committee
2003–2004	Member, University Committee on Committees
2003	Member, UC President Faculty Search Committee
2002–	Member, Astronomy Board Curriculum Committee
1999–	Chair, Halliday Lecture Committee, Astronomy Department
1998–1999	Member, Search Committee for Astronomy and Astrophysics Department, UC Santa Cruz
1996–1998	Member, Search Committee for Applied Math Program, UC Santa Cruz
1996–1998	Member, Lick Observatory Light Pollution Committee
1996	Member, Chancellor's Search Committee, University of California, Santa Cruz
1994	Member, Visiting Committee, Santa Cruz Institute for Particle Physics
1992–1997	Librarian, Lick Observatory Reading Room
1992–1993	Member, Chancellor's Diversity Task Force
1992	Member, Teaching Peer Review Committee, Astronomy Board
1992	Member, Chancellor's Junior Faculty Fellowship Committee
1991	Member, Director's Search Committee, UCO/Lick Observatory
1991–1992	Member, Qualifying Exam Committee for Astronomy Board
1990	Member, Chancellor's 2005 Advisory Committee on Long-Range Campus Plan
1989	Member, Chancellor's Advisory Committee on Undergraduate Awards
1985–1989	Chair, Qualifying Exam Committee for Astronomy Board
1985–1987	Lick Observatory Telescope Time Assignment Committee
1985	Chair, Organizing Committee for University of California, Santa Cruz Summer Astrophysics Workshop on Galaxies held July 1986
1984–1986	Librarian, Lick Observatory Reading Room
1984	Chair, Scientific Organizing Committee for Astronomical Society of the Pacific meeting held at University of California Santa Cruz, July 1984
1983–1989	Chair, Lick Observatory Light Pollution Committee
1983–1984	Member, Lick Observatory Advisory Committee
1982–1984	Member, Qualifying Exam Committee for Astronomy Board

1982–1984 Co-chair, Lick Observatory Colloquium Committee  
 1978–1980 Member, Graduate Support Committee, Astronomy Board  
 1978–1980 Lick Observatory Liaison, San Jose Municipal Government  
 1978 Member, Intercampus Committee on Large Telescope  
 1978 Member, Admissions Committee Astronomy Board  
 1976–1977 Chairperson, Lick Observatory 60-inch Telescope Committee  
 1975–1979 Editor, Lick Observatory Newsletter  
 1975–1977 Librarian, Lick Observatory Reading Room  
 1975–1976 Member, Lick Observatory Telescope Scheduling Committee  
 1975 Member, Director's Time Assignment Committee, Lick Observatory  
 1975 Co-chair, Astronomy Colloquium Committee  
 1974–1975 Member, Admissions Committee Astronomy Board  
 1974 Member, Colloquium Committee, Astronomy Board  
 1973–1979 Graduate Representative, Astronomy Board  
 1973 Chair, Admissions Committee, Astronomy Board  
 1973 Librarian, Lick Observatory Reading Room

### **Academic Senate committees**

2004–2006 Chair, Faculty Research Lecturer Committee  
 2002–2004 Chair, Committee on Committees  
 2000–2002 Member, Committee on Committees  
 1994 Member, 2 Ad Hoc Personnel Committees  
 1993 Member, 3 Ad Hoc Personnel Committees  
 1992 Member, 2 Ad Hoc Personnel Committees  
 1991–1994 Member, Career Advisory Committee  
 1989 Member, Ad Hoc Personnel Committee  
 1985 Member, Ad Hoc Personnel Committee  
 1984–1985 Member, Career Advisory Committee  
 1982 Member, Privilege and Tenure Committee  
 1979 Member, Ad Hoc Personnel Review Committee for Academic Chair  
 1978–1979 Member, Library Committee  
 1973–1976 Member, Graduate Council

### **Other University service**

2004 Member, KIRMOS Spectrograph Preliminary Design Review Panel, for Keck Observatory  
 1999–2001 University of California, Santa Cruz Site Coordinator, Center for Adaptive Optics  
 1999–2002 Faculty liaison, Center for Adaptive Optics building design and construction  
 1997– PI, DEIMOS Spectrograph Team for Keck Observatory  
 1994–1997 Co-PI, DEIMOS Spectrograph Team for Keck Observatory  
 1992–1994 Member, University of California. Observatories Advisory Committee  
 1991–1993 Member, then Co-chair, Science Steering Committee, Keck Observatory  
 1989–1991 Member, University of California Observatories Optical-Infrared Facilities Committee  
 1988 Chair, Critical Design Review, Keck Alignment Camera  
 1987–1990 Keck Semi-Annual Review Committee

1987–1990	Co-chair, Science Steering Committee, Keck Observatory
1987–1990	Member, Keck Operations Working Group
1986–1990	Member, Mauna Kea Site Preservation Committee
1986–1989	Member, University of California Astronomy Advisory Committee
1986–1987	Chair, Preliminary Design Review, Keck Alignment Camera
1986	Member, Science Steering Committee, Keck Observatory
1985–1986	Chair, Telescope Instruments Committee, Keck Observatory
1984	Coordinator, Optical Design for Ten Meter Telescope
1983–1984	Member, Astronomy Advisory Committee, Ten Meter Telescope
1980–1982	Member, Ten Meter Telescope Committee
1980	Member, Technical Subcommittee for Ten Meter Telescope
1979–1980	Chair, Science for the Ten Meter Telescope Committee
1974	Member, Vice Chancellor's Ad Hoc Committee on the Science Library

## PROFESSIONAL ACTIVITIES

### Consultative or other service to civic, state, or national governmental agencies

2005–	Chair, Compensation and Audit Committee, Annual Reviews, Inc.
2005–	Chair, Nominating Committee, Board of Overseers, Fermi National Accelerator Laboratory
2004–2005	Member, <i>Hubble Space Telescope</i> Time Assignment, Extragalactic Panel
2004–2005	Member, National Academy of Sciences, Committee on Elementary Particle Physics in the 21 <sup>st</sup> Century
2004	Member, National Academy of Sciences, Panel on Options to Extend the Life of the <i>Hubble Space Telescope</i>
2004	Member, Search Committee for the Director, Fermi National Accelerator Laboratory
2004	Member, Visiting Committee, Geophysical Laboratory, Carnegie Institution of Washington
2004–2007	Chair, National Academy of Sciences, Astronomy Section
2003–2004	Co-organizer (with A. Dekel) of The Origin of Galaxies, a Winter School at the Institute for Advanced Studies, the Hebrew University of Jerusalem, December 29, 2003–January 8, 2004.
2003–2004	Member, Class I Temporary Nominating Group, National Academy of Sciences
2003–2004	Fellow, Institute for Advanced Studies, Hebrew University of Jerusalem
2003–2004	Member, National Academy of Sciences Class I Membership Committee
2003	Member, <i>Chandra X-ray Observatory</i> Time Assignment Committee
2002	Panel organizer, NAS Symposium, “Cosmology Beyond the Standard Paradigm”
2002–2006	Member, Fermilab Board of Overseers
2002–2004	Member, <i>Hubble Space Telescope</i> Treasury Advisory Committee
2002–	Vice Chair, Board of Directors, Annual Reviews, Inc.
2002	Vice Chair, <i>Hubble Space Telescope</i> TAC Review Committee
2001	Member, National Research Council Committee on Research in Astronomy and Astrophysics (COMRAA)
2001–	Member, National Academy of Sciences Class I Membership Committee
2000–2001	Member and co-author, NAS Briefing Report, “From Quarks to the Cosmos”

- 2000– Chair, Employee Affairs Committee, Carnegie Institution of Washington
- 2000– Member, Scripps Institution of Oceanography Council
- 1999–2000 Member, Visiting Committee, Caltech Division of Physics, Mathematics, and Astronomy
- 1999 Reviewer, National Research Council Report on Astronomy Funding (Huchra Report)
- 1998–2001 Member, National Medal of Science Selection Committee
- 1998–2000 Member, Plumian Professor Chair Selection Committee, Institute of Astronomy, Cambridge University
- 1998–1999 Referee, Israeli National Science Foundation
- 1997–1999 Member, Waterman Award Committee, U.S. National Science Foundation
- 1997 Referee, Research Corporation
- 1996–1998 Chair, Search Committee for Director, Geophysical Laboratory of Carnegie Institution of Washington
- 1996– Member, Executive Committee of the Board, Annual Reviews, Inc.
- 1996–2006 Member, Board of Directors, SETI Institute
- 1995 Referee, Israeli National Science Foundation
- 1995 Member, Advisory Committee to the Director, Hubble Deep Field, Space Telescope Science Institute
- 1994 Member, Proposal Review Panel for the Advanced Camera, *Hubble Space Telescope*
- 1994 Member, Princeton Observatories Visiting Committee
- 1994 Member, Carnegie Observatories Visiting Committee
- 1994– Member, Editorial Affairs Committee, Annual Reviews, Inc.
- 1993–1995 Member, Advisory Committee on the Future of the Smithsonian Institution
- 1993 Member, President’s Advisory Panel, National Academy of Sciences
- 1993 Vice Chair, Briefing Report on Cosmology, National Academy of Sciences
- 1993–1995 Member, Committee on Astronomy and Astrophysics, National Academy of Sciences
- 1993–1994 Member, Advisory Board of California Math/Science Education Initiative
- 1991–1992 Member, Organizing Committee, National Academy of Sciences, Cosmology Symposium
- 1991 Chair, Watson Award Committee, National Academy of Sciences
- 1991 Referee, Director’s Discretionary Proposal, Jet Propulsion Lab
- 1990–1992 Member, *Hubble Space Telescope* Users Committee
- 1990 Member, *Hubble Space Telescope* GTO Policy Advisory Panel
- 1990 Member, *Hubble Space Telescope* Strategy Panel (to fix spherical aberration)
- 1989– Member, Board of Directors, Annual Reviews, Inc.
- 1989 Member, Search Committee for Director, Carnegie Observatories
- 1989 Member, Advisory Committee on Staff Review Policy, Carnegie Observatories
- 1988 Member, Ad Hoc National Science Foundation Review Panel on Cosmology Initiative
- 1988–1994 Member, California Council on Science and Technology
- 1986 Member, Visiting Committee Mt. Wilson–Las Campanas Observatories
- 1985– Trustee, Carnegie Institution of Washington
- 1985–1997 Member, Wide-Field Camera Team, *Hubble Space Telescope*
- 1985 Chair, Search Committee for Director, Mt. Wilson–Las Campanas Observatories
- 1985– Member, Employee Affairs Committee, Carnegie Institution of Washington

- 1985– Member, National Academy of Sciences  
 1884 Founder, Tinsley Award, American Astronomical Society  
 1984 Consultant, Michigan State University Physics & Astronomy Departments  
 1984 Referee, NASA Proposals  
 1984 Member, Galaxies and Clusters Working Group for Space Telescope Science Institute  
 1983–1984 Chair, Visiting Committee for Space Telescope Science Institute  
 1983–1984 Member, Scientific Advisory Committee for National New Technology Telescope  
 1982–1983 Referee, Research Corporation  
 1982 Referee, American Philosophical Society  
 1981 Member, Astronomy Grants Review Panel, National Science Foundation  
 1979–1981 Member, Astronomy Survey Committee, National Academy of Sciences (Field Report)  
 1979–1981 Member, Time Assignment Committee, Kitt Peak National Observatory  
 1979–1981 Member, Astronomy Advisory Panel, National Science Foundation  
 1979–1980 Chair, Extragalactic Working Group, National Academy of Sciences  
 1979–1980 Member, Optical IR Subcommittee, Astronomy Panel National Science Foundation  
 1978 Referee, NASA  
 1977–1978 Member, Princeton Wide-Field Camera Team for Space Telescope  
 1975–1976 Member, Time Assignment Committee, Cerro-Tololo Interamerican Observatory  
 1973– Referee, National Science Foundation

### Participation in public lectures or forums

- 2005 Sackler Colloquium, Physics Department, Princeton University  
 “Red and Dead Galaxies: ‘Terminated’ by Resident Black Holes?”  
 2005 Public lecture, Institut d’Astrophysique de Paris  
 “The Cosmic Foundations of Intelligent Life”  
 2005 Conference summary, Nearly Normal Galaxies II, UC Santa Cruz  
 “The Formation of Spheroidal Galaxies”  
 2005 Colloquium, Astronomy Department, Princeton University  
 “The Evolution of Galaxies Since  $z \sim 1$  from DEEP<sub>2</sub> and Other Surveys”  
 2004 Nova Colloquium speaker, Netherlands Research School of Astronomy  
 Colloquia delivered at Leiden University and Groningen University  
 “The Evolution of Galaxies over the Last Half of Cosmic Time”  
 2004 Halley Lecture, Physics Department, Oxford University  
 “The Evolution of Galaxies over the Last Half of Cosmic Time”  
 2004 Colloquium, Astronomy Department, University of Texas, Austin  
 “Early Results from the DEEP Survey”  
 2004 Radio interview, *Earth and Sky*  
 “Distant Galaxy Evolution”  
 2004 Colloquium, Astronomy Department, Caltech  
 “Early Results from the DEEP Survey”  
 2004 Public lecture, Hebrew University of Jerusalem  
 “The Big Bang... Truth or Nonsense?”  
 2004 Invited talk, University of California, Santa Cruz Alumni Luncheon  
 “The DEEP Survey and the DEIMOS Spectrograph”

- 2004 Colloquium, Astronomy Department, New York University  
“Early Results from the DEEP Survey”
- 2004 Three lectures at the “Origins of Galaxies, a Winter School at the Institute for  
Advanced Studies,” the Hebrew University of Jerusalem, December 2003–  
January 2004  
“The Properties of Nearby Massive Galaxies”  
“Star Formation and Mergers”  
“Galaxy Evolution to  $z \sim 1$ ”
- 2003–2004 Advisor to Public Television *NOVA* “Origins” series; appeared in Part IV.
- 2003 Colloquium, Kitt Peak National Observatory  
“Early Results from the DEEP<sub>2</sub> Survey”
- 2003 Colloquium, Department of Astronomy and Astrophysics, UC Santa Cruz  
“The DEIMOS Spectrograph”
- 2003 Invited talk, Society for Advancement of Chicanos and Native Americans  
in Science  
“Adaptive Optics”
- 2003 Keynote speaker, NSF symposium on Ground-Based Astronomy  
“From the Big Bang to Us: Astronomy and Our Place in the Cosmos”
- 2003 Public lecture, Astronomical Society of the Pacific  
“The Big Bang... Truth or Nonsense?”
- 2003 Colloquium, NASA–Ames Research Center  
“The DEEP Survey: Early Results”
- 2003 Invited lecture to COSMOS Summer High School Program (with  
P. Guhathakurta)  
“The Milky Way, Schroedinger's Cat, and You”
- 2003 Public lecture, Mt. Hamilton Summer Visitors Program  
“Adaptive Optics: Stars, Sight, and Science”
- 2003 Invited lecture, Workshop on Galaxy Formation, Hebrew University of Jerusalem  
“The Luminosity Function of Galaxies at  $z \sim 1$ ”
- 2003 Invited talk, Natural Sciences Division Quarterly Luncheon  
“Telescopes as Time Machines”
- 2002 Presentation to the Regents, University of California, Santa Cruz  
“The History of Astronomy at UCSC”
- 2002 Invited lecture to COSMOS Summer High School Program, University of  
California, Santa Cruz (with P. Guhathakurta)  
“Shredding, Tearing, and Merging: Violent Events in the History of Galaxies”
- 2002 Invited talk, SPIE conference, Kona, Hawaii  
“The DEIMOS Spectrograph”
- 2002 Invited talk, Keck Science meeting, UC Berkeley  
“The DEIMOS Spectrograph”
- 2002 Conference summary, Carnegie Centennial Symposium on Cosmology, Pasadena
- 2001 Invited lecture to COSMOS Summer High School Program, University of  
California, Santa Cruz (with P. Guhathakurta)  
“Violent Events in the History of Galaxies”
- 2001 Public lecture, Mt. Hamilton Summer Visitors Program  
“Adaptive Optics: Helping Ground-Based Telescopes Surpass Hubble”
- 2001 Conference Summary, Vatican Symposium on Disk Galaxies, Rome

- 2001 Invited review, Vatican Symposium on Disk Galaxies  
“The Evolution of Disk Galaxies to  $z = 1$ ”
- 2001 Public lecture, Foothill Planetarium Series  
“Iconic Images of Astronomy: Visions of the Universe and Ourselves”
- 2001 TV appearance, BBC science documentary  
“Black Holes and the Universe”
- 2000 Colloquium, Institute for Astronomy, Cambridge, England  
“The DEEP Redshift Survey”
- 2000 Colloquium, National Science Foundation, Washington, D.C.  
“The DEEP Redshift Survey”
- 2000 Presentation, Santa Cruz County physics teachers, Cabrillo College  
“The University of California, Santa Cruz Center for Adaptive Optics”
- 1999 Millenium Lecture: Hebrew University of Jerusalem  
“The Most Important Astronomical Images of the Twentieth Century”
- 1999 TV appearance, Discovery Channel International astronomy program  
“The Trouble with Hubble”
- 1999 Invited talk, AAAS Western Conference, Section on Science and Religion  
“The Anthropic Principle Demystified”
- 1999 TV appearance, PBS astronomy program  
“Voyage to the Milky Way”
- 1999 Invited review, symposium to celebrate the 60th Birthday of James Gunn  
“First Results from the DEEP Survey of the Distant Universe”
- 1999 Public lecture, Smithsonian Air and Space Museum  
“Hubble Images: Delight at the End of the Tunnel”
- 1999 Invited review, AAAS Conference on Cosmology and Religion: Cosmic Questions  
“The Big Bang Really Happened”
- 1999 Public lecture, Morrison Planetarium  
“Iconic Astronomical Images of the 20th Century”
- 1998 Carnegie lecture, Carnegie Institution of Washington, Washington, D.C.  
“The Most Memorable Images of the *Hubble Space Telescope*”
- 1998 Graduation speaker, Kirby Private School, Santa Cruz  
“The 21st Century”
- 1998 Invited speaker, Los Gatos Unitarian Church  
“Modern Cosmology: The Modern Version of Genesis”
- 1998 Lunch time talk, Kitt Peak National Observatory, Tucson  
“The Nature of High- $z$  Galaxies”
- 1998 Invited lecture, COSPAR meeting, Nagoya, Japan  
“Masses and Frequencies of Black Holes in Galactic Nuclei”
- 1998 Panel guest on Michael Kracznay’s radio talk show  
*Forum*, KQED radio
- 1998 Invited lecture, UC Sacramento Alumni Association, Sacramento  
“A Brief History of the Universe”
- 1998 Humanities Division Public Lecture, Santa Cruz Museum  
“How We Got Here: The Big Bang to Now”
- 1997 Colloquium, Center for Particle Astrophysics, UC Berkeley  
“The Nature of High- $z$  Galaxies”

- 1997 Invited After-Dinner Talk, Center for Non-Linear Optical Materials, Stanford University  
“The Modern Cosmic Myth”
- 1997 UCLA Science Commencement Address, UCLA  
“Scientists in the 21st Century”
- 1997 Lecture to Keck/CARA employees, CARA Headquarters, Waimea, HI  
“Keck Observations of the Distant Universe”
- 1997 DEIMOS Spectrograph Camera Critical Design Review  
“Optical Error Budget, Optical Fluid Couplings, Coatings, Thermal Environment”
- 1997 DEIMOS Spectrograph Software Critical Design Review  
“Software Goals, Flexure Compensation System”
- 1997 DEIMOS Spectrograph Detector/Dewar Critical Design Review  
“Flexure compensation system”
- 1997 Delphasus Lecture, UC Santa Cruz  
“A *Hubble Space Telescope* Picture Gallery”
- 1997 Antoinette de Vaucouleurs Prize Lecture, University of Texas, Austin  
“A *Hubble Space Telescope* Picture Gallery”
- 1997 Colloquium, University of Texas, Austin  
“The Nature of High-Redshift Galaxies”
- 1997 Public talk, National Academy Roundtable, Stanford University  
“A Review of Modern Cosmology”
- 1997 TV appearance, three-part cosmology program for PBS (appeared in two parts)  
“Mysteries of Deep Space”
- 1997 TV appearance, six-part astronomy series for the BBC (appeared in three parts)  
“Stephen Hawking’s Universe”
- 1997 TV appearance, astronomy program for the Discovery Channel  
“Cathedrals of the Sky”
- 1996 Public lecture, Institute for Theoretical Physics, UCSB  
“A *Hubble Space Telescope* Picture Gallery”
- 1996 Colloquium, Astronomy Department, UCLA  
“Speculations on High-Redshift Galaxies”
- 1996 Short talk, Santa Cruz Universe Factory Workshop  
“Elliptical Galaxies at Intermediate Redshift”
- 1996 Colloquium, Physics and Astronomy Department, University of California, San Diego, “Cores of Galaxies with *HST*: Status of the Black-Hole Search”
- 1996 DEIMOS Spectrograph Software Preliminary Design Review,  
“Overall Software Goals”
- 1996 Luncheon speaker, Soroptomists International Annual Meeting, Sacramento  
“My Life as an Astronomer”
- 1996 Public lecture, Churchill Club and Commonwealth Club, Palo Alto  
“The *Hubble Space Telescope*: Back from the Dead”
- 1995 DEIMOS Spectrograph Critical Design Review  
“Optical Coatings, Gratings, Filters, and Error Budget”
- 1995 Invited talk, Gravitational Dynamics Conference in honor of Donald Lynden-Bell  
Cambridge  
“Cores of Early-Type Galaxies: Evidence for Black Holes”
- 1995 Conference Summary, International Astronomical Union, Symposium No. 171 on  
Galactic Evolution, Heidelberg

- 1995 Colloquium, Aspen Institute of Physics  
“Core Parameter Relations of Early-Type Galaxies with *HST*”
- 1995 Public lecture, Monterey Institute for Research in Astronomy Public  
“Scientific Results from the *Hubble Space Telescope*”
- 1995 Invited talk, University of California, Santa Cruz Sigma Xi dinner  
“The Latest News from the *Hubble Space Telescope*”
- 1995 Interview, Santa Cruz Community TV station
- 1995 Public talk, Friends of the Santa Cruz Library  
“*Hubble Space Telescope* : Back from Dead”
- 1995 Colloquium, Department of Terrestrial Magnetism, Carnegie Institution of  
Washington  
“Nuclei of Galaxies with the *Hubble Space Telescope*”
- 1995 Colloquium, Astronomy Department, Caltech  
“Stellar Populations in Elliptical Galaxies”
- 1994 Colloquium, National Optical Astronomy Observatory  
“Stellar Populations in Elliptical Galaxies”
- 1994 DEIMOS Spectrograph Preliminary Design Review  
“Scientific Overview and Flexure Compensation System”
- 1994 Invited lecture, American Astronomical Society  
“Cores of Early-Type Galaxies as Viewed by the *Hubble Space Telescope*”
- 1994 Mohler Lecture, University of Michigan, Physics Department  
“From the Big Bang to Galaxies” (public lecture)  
“Elliptical Galaxies: Breaking the Age-Metallicity Degeneracy” (colloquium)
- 1994 Colloquium, Institute for Geophysics and Planetary Physics, Lawrence Livermore  
National Laboratory  
“Nuclei of Galaxies with the *Hubble Space Telescope*”
- 1994 Invited talk, Institute of Theoretical Physics, Workshop on Stellar Dynamics  
University of California Santa Barbara  
“The Double Nucleus of M31”
- 1994 Invited talk, International Astronomical Union, Symposium No. 164 on Stellar  
Populations, the Hague  
“The Ages of Stars in Elliptical Galaxies”
- 1994 TV appearance, KCTM, Southern California public television
- 1994 Public lecture, Monterey Institute for Astronomy  
“*Hubble Space Telescope*: Back from the Dead”
- 1994 University of California Santa Cruz Women’s Club  
“The *Hubble Space Telescope* Refurbishment Mission”
- 1994 University of California Santa Cruz Alumni Association  
“*Hubble Space Telescope*: Back from the Dead”
- 1994 TV appearance, Alan Alda’s “Scientific American Frontiers”
- 1993 Two invited talks, Symposium on Cosmic Velocity Fields, Paris Observatory  
“A Homogeneous Catalog of 3100 Galaxy Peculiar Motions”  
Conference Summary
- 1993 Invited talk, Canadian Astronomical Society, Victoria, B.C.  
“Galaxy Streaming Motions based on a New Homogeneous Catalog of 3100  
Galaxy Peculiar Motions”
- 1993 Colloquium, Astronomy Department, University of Washington  
“Galaxy Streaming Motions Within  $6000 \text{ km s}^{-1}$ ”

- 1993 Colloquium, Astronomy Department, University of California Los Angeles  
“Nuclei of Galaxies with the *Hubble Space Telescope*”
- 1993 Invited talk, East Bay Astronomical Society, Oakland, California  
“What’s New in Cosmology”
- 1992 Invited talk, Santa Catalina Girl’s School, Monterey  
“The *Hubble Space Telescope*”
- 1992 Gordon Tomkins Lecture, University of California San Francisco, Department of Biochemistry  
“Cosmology, the Universe, and You”
- 1992 Public lecture, Morrison Planetarium  
“*Hubble Space Telescope*: Back from the Dead”
- 1992 Invited talk, Northern California Society of Neurosurgeons  
“The *Hubble Space Telescope*”
- 1992 Invited talks, Santa Cruz Globular Cluster Workshop  
“Optical Spectra of Globular Clusters”  
“Proto-globular Clusters in NGC 1275”
- 1992 Public presentation, University of California Berkeley Center for Particle Astrophysics; Workshop on Changing the Climate in Science  
“The Big Bang: The Modern Creation Myth”
- 1992 Colloquium, Astronomy Department, University of California Berkeley  
“Nuclei of Galaxies as Imaged by the *Hubble Space Telescope*”
- 1992 Invited review, National Academy of Sciences Symposium on Large-Scale Structure of the Universe, Irvine, California  
“Large-Scale Motions of Galaxies”
- 1992 Bunyan Lectures, Physics Department, Stanford University  
“The Keck Telescopes” (public lecture)  
“Nuclei of Galaxies with the *Hubble Space Telescope*” (colloquium)
- 1992 Invited Marker Lectures, Astronomy Department, Pennsylvania State University  
“The Big Bang” (public lecture)  
“The Keck Telescope” (colloquium)  
“Nuclei of Galaxies with the *Hubble Space Telescope*” (colloquium)
- 1992 Colloquium, Physics Department, Sonoma State University  
“Nuclei of Galaxies with the *Hubble Space Telescope*”
- 1992 Colloquium, Physics, Department, University of California Santa Cruz  
“Nuclei of Galaxies with the *Hubble Space Telescope*”
- 1991 Colloquium, Royal Greenwich Observatory  
“Images of Galaxies with the *Hubble Space Telescope*”
- 1991 Darwin Lecture, Royal Astronomical Society  
“How Galaxies (Probably) Formed”
- 1991 Invited talk, IBM Corporation  
“Probing the Footprints of the Big Bang”
- 1991 Invited talk, Caltech Centennial Symposium on Cosmology  
“A Current Review of Large-Scale Motions of Galaxies”
- 1991 Invited talk, I.A.U. Colloquium No. 149 on Stellar Populations in Galaxies  
“Old Stellar Populations and Not-So-Old Stellar Populations”
- 1991 Colloquium, Board of Astronomy and Astrophysics, University of California Santa Cruz  
“Scientific Results from the Wide Field Camera, *Hubble Space Telescope*”

- 1990 Colloquium, Department of Terrestrial Magnetism, CIW  
“Scientific Results from the Wide Field Camera, *Hubble Space Telescope*”
- 1990 Invited talk at Science Writers Symposium, STScI  
“Galaxy Nuclei as Seen with the Wide-Field Planetary Camera on *Hubble Space Telescope*”
- 1990 Feshbach Lectures, Physics Department, MIT  
“The Far Side of the Great Attractor”  
“The Keck Telescope”  
“A Reappraisal of Cold Dark Matter and Large-Scale Structure in the Universe”
- 1990 Colloquium, University of California Riverside, Physics Department  
“The Great Attractor”
- 1990 Invited talk, Northern California Science Writers Association  
“The Keck Telescope, Space Telescope, and Cosmology”
- 1990 Public lecture, Varian, Palo Alto Research Center  
“Irregularities in the Expansion of the Universe”
- 1989 Invited talk, Taos Conference on Galaxy Formation, Taos, New Mexico  
“Update on the Great Attractor”
- 1989 Public lecture, Waimea, Hawaii  
“Voyaging in Space and Time with the Keck Telescope”
- 1988 Colloquium, Lockheed Missiles and Space Corporation, Palo Alto  
“The Great Attractor”
- 1988 Colloquium, Astronomy Department, Hebrew University  
“Large-Scale Anomalies in the Hubble Flow”
- 1988 Colloquium, Department of Physics and Astronomy, Tel Aviv University  
“The Keck Observatory”
- 1988 Colloquium, Physics Department, Hebrew University  
“Irregularities in the Expansion of the Universe”
- 1988 Carnegie Evening Annual Lecture, Washington, D. C.  
“Irregularities in the Expansion of the Universe”
- 1988 Welcoming remarks, Conference of California Street-lighting Association  
San Jose, California
- 1988 University of California Santa Cruz Dean’s Forum, Santa Clara  
“Astronomical Technology”
- 1988 Welcoming address, Lick Centennial, Mt. Hamilton  
“Astronomical Instrumentation at Lick Observatory”
- 1987 Invited lecture, University of California Los Angeles Public Science Series  
“Galaxies: A Milestone on the Road to Intelligent Life”
- 1987 Conference Summary, Royal Greenwich Observatory Workshop, London
- 1987 Invited lecture, Royal Astronomical Society, London  
“The Structure of Elliptical Galaxies”
- 1987 Colloquium, University of California Santa Barbara  
“Irregularities in the Hubble Flow”
- 1987 Colloquium, Yale University  
“Irregularities in the Hubble Flow”
- 1987 Colloquium, University of California. Berkeley Physics Department  
“Large-Scale Motions of Galaxies”
- 1987 Invited review talk, IAU Colloquium No. 130  
“Large-Scale Structure and Bulk Motions”

- 1987 Colloquium, University of California Santa Cruz Physics Department  
“The New Super Galactic Center”
- 1987 Colloquium, Space Telescope Science Institute  
“Large-Scale Motions of Galaxies”
- 1987 Invited Tetelman Lecture, Jonathan Edwards College, Yale University  
“Galaxies and the Universe”
- 1987 Colloquium, Lowell Observatory, United States Naval Observatory  
“Irregularities in the Hubble Flow”
- 1987 Invited lecture, Kenna Club, Santa Clara University  
“The Early Universe”
- 1987 Colloquium, Sonoma State Physics Department  
“Irregularities in the Hubble Expansion”
- 1987 Invited lecture, Vatican Symposium on Large-Scale Motions of Galaxies, Rome  
(shared with D. Burstein)  
“Motions of Nearby Galaxies”
- 1986 Heineman Prize Lecture, American Astronomical Society, Houston  
“Elliptical Galaxies and the Hubble Expansion of the Universe”
- 1986 Colloquium, University of Chicago,  
“E Galaxies and the Hubble Flow”
- 1986 Colloquium, Department of Terrestrial Magnetism, Washington, D. C.  
“E Galaxies and the Hubble Flow”
- 1986 Colloquium, Hewlett–Packard Corporation, Palo Alto  
“The Origin of the Galaxies”
- 1986 Invited talk, Sons in Retirement Association, San Jose  
“Space Telescope: Eye of the Future”
- 1986 Three invited lectures at the Santa Cruz Theoretical Advanced Study Institute on  
Elementary Particle Physics  
“Particle Physics and Cosmology”
- 1986 Invited talk on light pollution and astronomy to Hawaii public works officials  
“Astronomers Do It at Night”
- 1986 University of California Santa Cruz Astrophysics Workshop  
“Scaling Laws for Elliptical Galaxies”
- 1986 Invited Director’s Prize Lecture, Lawrence Livermore Laboratory  
“The Origin of Structure in the Universe”
- 1986 Colloquium, Lawrence Livermore Laboratory  
“A Local Large-Scale Streaming Flow”
- 1986 Invited Laboratory Guest Lecturer, Los Alamos Laboratory  
“Irregularities in the Hubble Expansion of the Universe”
- 1985 Colloquium, Arizona State University  
“Cold Dark Matter and Galaxy Formation”
- 1985 Colloquium, University of California Los Angeles  
“Origin of Galaxies”
- 1985 Colloquium, Stanford Linear Accelerator Center  
“Origin of Galaxies”
- 1985 Public lecture, Dartmouth College  
“Galaxies and Cosmology”
- 1985 Colloquium, University of California Berkeley  
“Galaxy Formation and Cold Dark Matter”

- 1985 Colloquium, Physics Department, University of California Santa Cruz  
“The Keck Observatory”
- 1985 Invited lecture, Princeton Symposium on Dark Matter  
“Cold Dark Matter: Key Issues”
- 1985 Symposium, *Hubble Space Telescope*, Baltimore  
“Using *HST* to Study Distant Galaxies”
- 1985 Lecture, Sigma Xi, Swarthmore College
- 1985 Colloquium, Swarthmore College  
“The Keck Observatory”
- 1984 Invited lecture at IES–AA Joint Meeting on Light Pollution and Astronomy,  
Arizona State University, Tempe, Arizona  
“Astronomy and New Technology”
- 1984 Invited talk, Stanford Women in Science Lecture Series, Stanford University  
“How Galaxies Form”
- 1984 Colloquium, Astronomy Department, Princeton University  
“The Origin of the Structure in the Universe”
- 1984 Presentation at NNTT Open Meeting, Baltimore  
“Observing Distant Galaxies with the NNTT”
- 1984 Talk, Santa Cruz Lions Club  
“The University of California Ten Meter Telescope Project”
- 1984 Colloquium, Stanford University  
“Galaxy Formation and Cold Dark Matter”
- 1984 Talk, American Association of Physics Teachers, Santa Cruz  
“The Origin of Structure in the Universe”
- 1983 Three public lectures as visiting professor, University of Hawaii  
“The Metallic-Line Spectra of K–giants and Old Stellar Populations”  
“Non-Luminous Matter in Dwarf Galaxies”  
“Galaxy Formation and Cosmology”
- 1983 Invited guest, KCBS–FM Science Talk Show, two hours
- 1983 Two interviews on “The University Explorer” radio series on galaxy formation
- 1983 Invited speaker at public forum of the Astronomical Society of the Pacific  
Stanford  
“Astronomy of the 1990’s”
- 1983 Invited lecture at ESO–CERN Symposium on Cosmology and Fundamental  
Physics, Geneva, Switzerland  
“Galaxy Formation and Cosmology”
- 1982 Colloquium, University of Michigan  
“Galaxy Formation”
- 1982 Colloquium, Mt. Wilson–Las Campanas Observatories  
“Galaxy Formation”
- 1982 Invited review, IAU Joint Discussion, Patras, Greece  
“The Stellar Content of Elliptical Nuclei”
- 1982 Invited lecture, IBM Employee Education Division  
“Astronomy in the 1980s”
- 1982 Invited lecture, San Francisco Bay Area Amateur Astronomers  
“Astronomy and Light Pollution”
- 1982 Colloquium, Astronomy Department, University of Groningen (Netherlands)  
“Non-Luminous Matter in Dwarf Galaxies”

- 1982 Colloquium delivered at the following institutions: National Radio Astronomy Observatory, Very-Large Array, Dutil, New Mexico; Dutch Foundation for Radio Astronomy, Dwingeloo, Netherlands; Astronomy Department, University of California Los Angeles  
“Non-Luminous Matter in Dwarf Galaxies”
- 1982 Invited lecture at the Texas Symposium on Relativistic Astrophysics  
Austin, Texas  
“Large Optical Telescopes: New Views into Space and time”
- 1981 Invited lecture, Kenna Club, Santa Clara University  
“Astronomy in the 1980s”
- 1981 Invited lecture, IBM Planning Division, San Jose  
“Astronomy in the 1980s”
- 1981 Invited review, Vatican Study Week on Cosmology and Fundamental Physics  
Rome  
“Galaxies as Cosmological Probes”
- 1981 Contributed paper, Vatican Study Week on Cosmology and Fundamental Physics  
Rome  
“The Origin of the Hubble Sequence”
- 1981 Invited review lecture, Aspen Institute for Physics  
“The History of Star Formation in Early-Type Galaxies”
- 1981 Colloquium at San Francisco State University  
“Galaxy Formation”
- 1981 Colloquium at University of Wyoming  
“Galaxy Formation”
- 1980 Invited review lecture, Kitt Peak Symposium on Telescopes for the 1980s, Tucson  
“Science with a 10-m Telescope”
- 1979 Invited review paper, International Astronomical Union, Montreal  
“Composition of Nearby Galaxies”
- 1979 Invited review lecture, International Astronomical Union, Montreal  
“Structure of the Nuclei of Normal Galaxies”
- 1978 Movie: Women and Mathematics, Mills College
- 1978 Television: Bay Area Women (locally) KQED; Turnabout (nationally) on NET network
- 1978 Public lecture, Smithsonian Air & Space Museum Planetarium
- 1978 Invited lecturer, Princeton University Observatory (5 lectures)
- 1978 Colloquium at Arizona State University  
“Light Pollution and Astronomical Observations”
- 1978 Colloquium at University of Illinois  
“Light Pollution and Astronomical Observations”
- 1978 Colloquia at University of Washington, Caltech, and Kitt Peak National Observatory: “Composition of Nearby Galaxies”
- 1977 Invited review lecture, Yale University Conference on Formation and Evolution of Galaxies  
“The Chemical Composition of Old Stellar Populations”
- 1977 Invited participant, University of Arizona, Career Conference on Women in Science
- 1976 Colloquium, University of Michigan  
“H I in Early-Type Galaxies”

- 1976 Colloquium, Harvard University  
“H I in Early-Type Galaxies”
- 1976 Paper delivered at the Grenoble meeting of the IAU, Grenoble, France,  
“H I in the Sombrero Galaxy”
- 1975 Paper delivered at Cambridge Workshop on Galaxies, Cambridge  
“The Nature of the Hubble Sequence”
- 1975 Paper delivered at Cambridge Workshop on Galaxies, Cambridge  
“Rotation Curves of Spiral Galaxies”
- 1975 Paper delivered at Cambridge Workshop on Galaxies, Cambridge  
“Core Properties of Elliptical Galaxies”
- 1975 Invited lecture, American Astronomical Society, San Diego, San Diego State  
University  
“Recent Developments in the Formation and Evolution of Galaxies”
- 1975 Divisional Colloquium, Natural Sciences Division, University of California Santa  
Cruz  
“Elliptical Galaxies: Standard Candles of the Universe”
- 1975 Colloquium, University of Toronto  
“Core Properties of Elliptical Galaxies”
- 1975 Colloquium, Yale Observatory  
“Core Properties of Elliptical Galaxies”
- 1975 Colloquium, University of California San Diego  
“Gas in Early-Type Galaxies”
- 1974 Colloquium, Kitt Peak National Observatory  
“H I in Early-Type Galaxies”
- 1974 Colloquium, University of California. Berkeley  
“H I in Early-Type Galaxies”
- 1974 Colloquium, University of California Los Angeles  
“H I in Early-Type Galaxies”
- 1974 Colloquium, Sonoma State  
“Nature of the Hubble Sequence”
- 1974 Colloquium, University of Maryland  
“Velocity Dispersions in E Galaxies”
- 1974 Colloquium, University of Wisconsin  
“Velocity Dispersions in E Galaxies”
- 1974 Colloquium, University of Minnesota  
“Velocity Dispersions in E Galaxies”

### **Service to the staff or editorial board of scholarly journals, or other publications**

- 1995 Referee, *Monthly Notices of the Royal Astronomical Society*
- 1994 Referee, *Monthly Notices of the Royal Astronomical Society*
- 1991 Referee, *Nature*
- 1989 Referee, *Nature*
- 1987 Referee, *Nature*
- 1986 Referee, *Publications of the Astronomical Society of the Pacific*
- 1984–1986 Associate Editor, *Astrophysical Journal Letters*
- 1983–1990 Referee, *Astronomy and Astrophysics*
- 1983 Referee, *Publications of the Astronomical Society of the Pacific*

1982–1985 Editorial Board, *Annual Review of Astronomy and Astrophysics*  
 1982 Associate Editor, *Astrophysical Journal Letters*  
 1981 Referee, *Applied Optics*  
 1980–1981 Referee, *Astronomy and Astrophysics*  
 1976 Referee, *Publications of the Astronomical Society of the Pacific*  
 1975– Referee, *Astrophysical Journal*  
 1974– Referee, *Astronomical Journal*

### Membership and activities in professional associations (activities, dates)

2001– Member, American Philosophical Society  
 1998– Member, California Academy of Sciences  
 1992–1994 Member, Heineman Prize Committee, American Astronomical Society  
 1989– Member, American Academy of Arts and Sciences  
 1986–1990 Member, Nominating Committee, American Astronomical Society  
 1986–1989 Member, Light Pollution Committee, American Astronomical Society  
 1985 Chair, Tinsley Award Committee, American Astronomical Society  
 1983 Chair, Warner–Pierce Prize Committee, American Astronomical Society  
 1983 Member, Tinsley Memorial Fund-Raising Committee  
 1981–1984 Councillor, American Astronomical Society  
 1981–1983 Member, U.S. National Committee for the International Astronomical Union  
 1980–1982 Member, Warner–Pierce Prize Committee, International Astronomical Union  
 1980–1982 Chairperson, External Awards Committee, American Astronomical Society  
 1979–1980 Elected representative: U.S. National Committee for the International Astronomical Union  
 1979 Chairperson, Committee on Honors and Awards, American Astronomical Society  
 1977– Member, International Astronomical Union  
 1974–1978 Member, Medal of Science Committee, American Astronomical Society  
 1970– Member, American Astronomical Society

### TEACHING

(not including thesis supervisions or independent research)

Quarter/ Year	Name/Number	Title of Class	Total Enrolled	Shared Y/N	% Evaluations Returned
Fall 05	Astronomy 297	Independent Study	3	No	n/a
Spring 05	Astronomy 297	Independent Study	2	No	n/a
Winter 05	Astronomy 297	Independent Study	2	No	n/a
Fall 04	Astronomy 297	Independent Study	2	No	n/a
Spring 04	Astronomy 297	Independent Study	1	No	n/a

<b>Quarter/ Year</b>	<b>Name/Number</b>	<b>Title of Class</b>	<b>Total Enrolled</b>	<b>Shared Y/N</b>	<b>% Evaluations Returned</b>
Winter 04	Astronomy 297	Independent Study	2	No	n/a
Fall 03	Astronomy 297	Independent Study	1	No	n/a
Fall 02	Astronomy 240A	Galactic & Extragalactic Systems	15	No	87%
Fall 02	Astronomy 297	Independent Study	1	No	n/a
Spring 02	Astronomy 297	Independent Study	1	No	n/a
Winter 02	Astronomy 297	Independent Study	1	No	n/a
Fall 01	Astronomy 297	Independent Study	1	No	n/a
Spring 01	Astronomy 5	Introduction to Galaxies and Cosmology	65	No	42%
Spring 01	Astronomy 297	Independent Study	2	No	n/a
Winter 01	Astronomy 297	Independent Study	2	No	n/a
Fall 00	Astronomy 297	Independent Study	3	No	n/a
Spring 00	Astronomy 240A	Galactic & Extragalactic Systems	5	No	40%
Spring 00	Astronomy 297	Independent Study	2	No	n/a
Winter 00	Astronomy 297	Independent Study	1	No	n/a
Spring 99	Astronomy 297	Independent Study	1	No	n/a
Winter 99	Astronomy 297	Independent Study	1	No	n/a
Fall 98	Astronomy 297	Independent Study	1	No	n/a
Fall 98	Astronomy 240A	Galactic & Extragalactic Stellar Systems	7	No	43%
Fall 96	Astronomy 240A	Galactic & Extragalactic Stellar Systems	5	No	100%
Winter 96	Astronomy 240A	Galaxies	9	No	44%
Spring 95	Astronomy 297	Independent Study	1	No	n/a
Winter 95	Astronomy 240A	Galaxies	7	No	25%
Winter 95	Astronomy 297	Independent Study	1	No	n/a
Spring 94	Astronomy 5	Introduction to Galaxies and Cosmology	44	No	68%
Spring 94	Astronomy 297	Independent Study	2	No	n/a
Winter 94	Astronomy 297	Independent Study	2	No	n/a
Fall 93	Astronomy 297	Independent Study	1	No	n/a

<b>Quarter/ Year</b>	<b>Name/Number</b>	<b>Title of Class</b>	<b>Total Enrolled</b>	<b>Shared Y/N</b>	<b>% Evaluations Returned</b>
Spring 93	Astronomy 297	Independent Study	2	No	n/a
Winter 93	Astronomy 240A	Galaxies	10	No	100%
Winter 93	Astronomy 297	Independent Study	1	No	n/a
Fall 92	Astronomy 5	Introduction to Galaxies and Cosmology	69	No	n/a
Spring 92	Astronomy 5	Introduction to Galaxies and Cosmology	26	No	n/a
Spring 91	Astronomy 240A	Galaxies	14	No	n/a
Winter 89	Astronomy 240A	Galaxies	13	No	n/a
Spring 88	Astronomy 113	Physical Cosmology	5	No	n/a
Fall 86	Astronomy 240A	Galaxies	8	No	n/a
Spring 86	Astronomy 113	Physical Cosmology	15	No	n/a
Fall 84	Astronomy 13	Our Galaxy and Beyond	15	No	n/a
Spring 84	Astronomy 240A	Galactic Stellar Systems			n/a
Fall 82	Astronomy 240A	Galactic Structure	9	No	n/a
Spring 82	Astronomy 297	Independent Study	1	No	n/a
Spring 82	Astronomy 5	Our Galaxy and Beyond	90	No	n/a
Spring 80	Astronomy 5	Our Galaxy and Beyond	50	No	n/a
Spring 79	Astronomy 199	Tutorial	1	No	n/a
Spring 79	Astronomy 199	Tutorial	1	No	n/a
Spring 79	Astronomy 5	Our Galaxy and Beyond	35	No	n/a
Spring 78	Astronomy 5	Our Galaxy and Beyond	22	No	n/a
Spring 77	Astronomy IC	Basic Astronomy	25	No	n/a
Fall 75	Astronomy 1A	Introductory Astronomy	140	No	n/a
Winter 75	Astronomy 240A	Galactic Astronomy	10	No	n/a
Winter 74	Astronomy 11B	Introductory Astronomy	7	No	n/a
Spring 73	Astronomy 11B	Introductory Astronomy	4	No	n/a
Spring 73	Astronomy 199	Tutorial: Extragalactic Astronomy	1	No	n/a
Winter 73	Astronomy 199	Astronomy Tutorial	1	No	n/a
Winter 72	Astronomy 220B	Stellar Spectroscopy	8	No	n/a

**GRADUATE STUDENTS AND FELLOWS SUPERVISED**

<b>Year</b>	<b>Graduate Students</b>	<b>Postdoctoral Fellows</b>
2005	L. Raschke (shared) N. Konidaris (shared) G. Novak (shared) J. Harker G. Graves	C. Willmer K. Noeske A. Metevier S. Kassin
2004	P. Jonsson (shared) L. Raschke (shared) N. Konidaris (shared) G. Novak J. Harker G. Graves	B. Weiner C. Willmer K. Noeske
2003	P. Jonsson (shared) L. Raschke (shared) N. Konidaris (shared) J. Harker (shared) G. Novak	A. Phillips (Assoc. Research Astronomer) E. Steinbring (CfAO) B. Weiner C. Willmer R. Schiavon
2002	P. Jonsson (shared) L. Raschke (shared)	A. Phillips (Associate Specialist) R. Schiavon E. Steinbring (CfAO) B. Weiner
2001	L. Raschke (shared) P. Jonsson (shared)	A. Phillips (Associate Specialist) R. Schiavon (Gemini Fellow) E. Steinbring (CfAO)
2000	K. Wu L. Raschke P. Jonsson (shared)	A. Phillips (Associate Specialist) R. Schiavon (Gemini Fellow) E. Steinbring (CfAO)
1999	K. Wu P. Jonsson (shared)	A. Phillips (Associate Specialist) K. Gebhardt (Hubble Fellow) L. Simard M. Im
1998	K. Wu P. Jonsson	A. Phillips (Associate Specialist) N. Vogt K. Gebhardt (Hubble Fellow) L. Simard
1997	K. Wu S. Trager	A. Phillips (Associate Specialist) N. Vogt K. Gebhardt (Hubble Fellow)
1996	S. Trager K. Wu	A. Phillips (Associate Specialist)
1995	S. Trager K. Wu	C. Grillmair
1994	S. Trager	C. Grillmair

<b>Year</b>	<b>Graduate Students</b>	<b>Postdoctoral Fellows</b>
1993	J. Gonzalez S. Trager C. Dalle Ore	C. Grillmair
1992	C. Dalle Ore S. Courteau S. Trager J. Gonzalez G. Worthey	R. Light C. Gillmair
1991	C. Dalle Ore G. Worthey J. Gonzalez S. Courteau	R. Light
1990	C. Dalle Ore S. Courteau J. Gonzalez G. Worthey	R. Light
1989	C. Dalle Ore S. Courteau J. Gonzalez	R. Light
1988	C. Dalle Ore J. Gonzalez J. Holtzman S. Courteau	
1987	C. Dalle Ore J. Gonzalez J. Holtzman S. Courteau	
1986	C. Dalle Ore J. Gonzalez J. Holtzman S. Courteau	
1985	Kap Soo Oh J. Gonzalez D. Terndrup C. Dalle Ore J. Holtzman	
1984	Kap Soo Oh J. Gonzalez D. Terndrup, visiting grad student C. Dalle Ore from Padua, Italy	
1983	T. Lauer Kap Soo Oh	
1982	T. Lauer	
1981	R. Stoughton	
1980	R. Jackson R. Stoughton	R. Davies

<b>Year</b>	<b>Graduate Students</b>	<b>Postdoctoral Fellows</b>
1979	R. Jackson R. Stoughton	R. Davies N. Krumm
1978	R. Jackson	
1977	D. Burstein R. Jackson	
1976	A. Dressler D. Burstein	
1975	R. Jackson J. Nocar A. Dressler D. Burstein Independent Study: M. Gaskell K. Krisciunas	
1974	R. Jackson A. Dressler J. Nocar B. McNamara	
1973	B. McNamara A. Dressler J. Nocar	

#### **STUDENTS AWARDED PhD DEGREE**

2000	K.L. Wu
1997	S.C. Trager
1993	C. Dalle Ore, J. Gonzalez
1992	S. Courteau, G. Worthey
1989	Jon Holtzman, Kap Soo Oh
1986	D. Terndrup
1984	T. Lauer
1982	R. Jackson
1978	D. Burstein
1977	A. Dressler
1975	B. McNamara

#### **UNDERGRADUATE RESEARCH**

2005	C.A. Cabrera	(CfAO diversity intern; shared)
2004	C.A. Cabrera	(CfAO diversity intern; shared)
	J. Holt	(CfAO diversity intern; Senior Thesis; shared)
1974	S. Edberg	(President's Undergraduate Fellow)

Our academic history. Back to 'A brief history'. For over 100 years, innovative academic research at the University has influenced society and made an impact on people's lives. Birmingham is where pacemakers and plastic heart valves were developed, where the first artificial vitamin (Vitamin C) was synthesised, and where the cavity magnetron was developed, leading to applications such as radar and the microwave oven. Please search below for academic staff who are connected to the Faculty of History. If you have any queries, please contact [comms@history.ox.ac.uk](mailto:comms@history.ox.ac.uk). Graduate Supervision. If you are looking for an prospective supervisor who is working in your proposed research area, please select the relevant items in the "Period", "Region", and "Specialism" Sections below. An academic history can be a large, multivolume work such as the Cambridge Modern History, written collaboratively under some central editorial control. In the 19th century, the idea appeared in universities that a definitive history could be written of a major region of the world for a great span of time in a similar manner to the way that an encyclopedia was written. The time period was subdivided into eras and one volume specified for each. Within each volume there would be a fixed number of topics.