Sandra M. Faber
Astronomer/Professor of Astronomy and Astrophysics
University of California Observatories/Lick Observatory

INTERESTS AND EXPERTISE

Galaxies, stellar populations, cosmology, instrumentation

ACADEMIC HISTORY

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

POSITIONS HELD

1972–77 Assistant Professor/Assistant Astronomer, Lick Observatory, University of California, Santa Cruz
1977–79 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

HONORS AND AWARDS (selected)

1977–81 Alfred P. Sloan Foundation Fellow
1984 *Science Digest* 100 Best American Scientists under 40
1985 Elected to National Academy of Sciences
1986 Heineman Prize, American Astronomical Society
1989 Elected to American Academy of Arts and Sciences
1996 University Professor, University of California
1997 Antoinette de Vaucouleurs Medal, University of Texas
2001 Elected to American Philosophical Society
2003 *Discover* Magazine: 50 Best American Women Scientists
2005 Médaille de l'Institute d'Astrophysique de Paris
2006 Centennial Medal of the Harvard University Graduate School of Arts and Sciences
2006 Honorary D.Sc., University of chicago

EXTERNAL RESEARCH SUPPORT ($20,000 and over)

2005–07	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
2005–07	Space Telescope Science Institute, "The Stellar Mass Function of Disks and and Bulges at z = 1" (HST–AR–10651.01–A)	$79,642
2005–06	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
2004–06	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
2002–06	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
2001–03	Center for Adaptive Optics, NSF Subcontract, "Hands-On AO Teaching Demos" (AST–98 76783; Project 61)	$59,401
2000–04	National Science Foundation (with D. Koo and P. Guhathakurta; Faber PI), "The DEEP Survey of the Distant Universe" (AST 00–71198)	$1,299,915

RECENT PUBLICATIONS (selected)

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.

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.

The nature of high-*z* galaxies. R.S. Somerville, J.R. Primack and S.M. Faber. *MNRAS*, **320**, 504–528, 2001.

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.

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.

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.

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.

The Deep Evolutionary Exploratory Probe 2 Galaxy Redshift Survey: The galaxy luminosity function to $z \sim 1$. C.N.A. Willmer, S.M. Faber, D.C. Koo, B.J. Weiner, J.A. Newman, A.L. Coil, A.J. Connolly, C. Conroy, M.C. Cooper, M. Davis, D.P. Finkbeiner, B.F. Gerke, P. Guhathakurta, J. Harker, N. Kaiser, S. Kassin, N.P. Konidaris, L. Lin, G. Luppino, D.S. Madgwick, K.G. Noeske, A.C. Phillips and R. Yan. *ApJ*, **647**, 853–873, 2006.

On the origin of [O II] emission in red-Sequence and poststarburst galaxies. R. Yan, J.A. Newman, S.M. Faber, N. Konidaris, D. Koo and M. Davis. *ApJ*, **648**, 281–298, 2006.

A survey of galaxy kinematics to $z \sim 1$ in the TKRS/GOODS-N Field. II. Evolution in the Tully-Fisher Relation. B.J. Weiner, C.N.A. Willmer, S.M. Faber, J. Harker, S.A. Kassin, A.C. Phillips, J. Melbourne, A.J. Metevier, N.P. Vogt and D.C. Koo. *ApJ*, **653**, 1049-1069, 2006.

UNIVERSITY SERVICE (selected)

Administrative appointments

2005–07	Chair, Department of Astronomy and Astrophysics
2005–06	Chair, Search Committee, UCO/Lick Director
2004	Member, UC Provost's Faculty Search Committee
2003	Member, UC President Faculty Search Committee

Academic senate committees

2000–04	Chair and/or Member, Committee on Committees

PROFESSIONAL ACTIVITIES (selected)

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

2006-	Board of Overseers, Harvard University
2004-05	Member, National Academy of Sciences, Committee on Elementary Particle Physics in the 21st Century (EPP 2010)
2004	Member, National Academy of Sciences, Panel on Options to Extend the Life of the *Hubble Space Telescope*
2004-07	Chair, National Academy of Sciences, Astronomy Section
2002-6	Member, Fermilab Board of Overseers
2002-	Vice Chair, Board of Directors, Annual Reviews, Inc.
2000-	Member, Scripps Institution of Oceanography Council
1985-	Member, Board of Trustees, Carnegie Institution of Washington

Five major presentations

2005	Sackler Colloquium, Physics Department, Princeton University, “Red and Dead Galaxies: ‘Terminated’ by Resident Black Holes?”
2005	Conference summary, Nearly Normal Galaxies II, UC Santa Cruz, “The Formation of Spheroidal Galaxies”

2004 Halley Lecture, Physics Department, Oxford University, “The Evolution of Galaxies over the Last Half of Cosmic Time”
2003–04 Advisor to Public Television *NOVA* “Origins” series; appeared in Part IV.
2003 Keynote speaker, NSF symposium on Ground-Based Astronomy, “From the Big Bang to Us: Astronomy and Our Place in the Cosmos”

STUDENTS AND FELLOWS SUPERVISED (lifetime)

Ph.D. Advisees

L. Raschke (shared)
N. Konidaris (shared)
G. Novak (shared)
J. Harker
G. Graves
P. Jonsson (shared)
K. Wu
S. Trager
J. Gonzalez
C. Dalle Ore
S. Courteau
G. Worthey
J. Holtzman
K.S. Oh
D. Terndrup
T. Lauer
R. Stoughton
R. Jackson
D. Burstein
A. Dressler
J. Nocar
M. Gaskell
K. Krisciunas
B. McNamara

Postdoctoral Fellows

C. Willmer
K. Noeske
A. Metevier
S. Kassin
B. Weiner
A. Phillips
E. Steinbring
R. Schiavon
K. Gebhardt
L. Simard
M. Im
N. Vogt
C. Grillmair
R. Light
R. Davies
N. Krumm

Senior Theses

Jenny Holt

STUDENTS AWARDED PhD DEGREE

K.L. Wu
S.C. Trager
C. Dalle Ore
J. Gonzalez
S. Courteau
G. Worthey
J. Holtzman
K.S. Oh
D. Terndrup
T. Lauer
R. Jackson
D. Burstein
A. Dressler
B. McNamara