

VITA
MARTHA P. HAYNES
Goldwin Smith Professor of Astronomy, Cornell University
530 Space Sciences Building
Cornell University
Ithaca, NY 14853
haynes@astro.cornell.edu

Education:

1973 B.A. Wellesley College, physics and astronomy, with special honors
1975 M.A. Indiana University, astronomy
1978 Ph.D. Indiana University, astronomy

Professional Employment:

1978-80 postdoctoral research associate , National Astronomy and Ionosphere Center,
Arecibo Observatory
1981 research associate, National Astronomy and Ionosphere Center
1981-83 assistant director for Green Bank operations and assistant scientist, National
Radio Astronomy Observatory
responsible for daily operations at rural site with 84 employees, \$3M/yr budget
1983-86 assistant professor, Department of Astronomy, Cornell University
1986-91 associate professor
1991- professor
director of undergraduate study in astronomy (1990--1997, 1998--2002)
associated with the Center for Radiophysics and Space Research

Concurrent Positions:

1988 visiting fellow, Australian National University
1989 visiting professor, University of Milano and Astronomical Observatory of Brera
1989 visiting professor, University of Bologna
1990 visiting professor, Astrophysical Observatory of Arcetri
1991-4 collaborative research scientist, National Radio Astronomy Observatory
1997 visiting scientist, European Southern Observatory
1998-9 interim president, Associated Universities, Inc.
responsible for \$40M/yr cooperative agreement with National Science Foundation
for operation of the National Radio Astronomy Observatory and for \$29M design
and development phase of the Millimeter Array (now ALMA)
2005-8 deputy director, National Astronomy and Ionosphere Center
member of senior management team for a \$10M/yr cooperative agreement with
National Science Foundation for operation of the Arecibo Observatory
2013-5 deputy director, CCAT Project
member of senior management team for project to construct a wide-field
submillimeter telescope at 5600 meters in northern Chile
2016- chair, CCAT Corp. board of directors (2017-); director, CCAT Project (2016-17)
leadership of project to construct a novel-design fast-mapping submillimeter
telescope at 5600 meters in northern Chile

Honors and Fellowships:

- 1989 Henry Draper Medal, National Academy of Sciences
1993 Dean's Award for Excellence in Advising, College of Arts and Sciences, Cornell University
1999 elected to American Academy of Arts and Sciences
2000 elected to National Academy of Sciences
2000 elected Fellow of the American Association for the Advancement of the Sciences
2002 elected Goldwin Smith Professor of Astronomy, Cornell University
2007 Cecilia Payne-Gaposchkin lecturer, Harvard Smithsonian Center for Astrophysics
2008 Lyman Spitzer Jr. Lecturer, Princeton University
2014 Orren C. Mohler Prize, Astronomy Department, University of Michigan
2014-5 Helena Kluyver Visitor, Netherlands Institute for Radio Astronomy
2014 Frank K. Edmondson Lecturer, Astronomy Department, Indiana University

Professional Society Membership:

American Association for the Advancement of Science
American Astronomical Society
American Physical Society
International Astronomical Union
International Union of Radio Science

Selected Professional Activities:

Cornell University Service (selected):

member, University Appeals Board, 2014-
member, University Courses Advisory Committee, 2011-2016
member, Strategic Planning Advisory Council, 2009-10
chair, Provost Search Committee, 2008
liaison, College of Arts and Sciences, ADVANCE program 2007-8
member, Faculty Oversight Committee, Center for Advance Computing, 2007-8
member, Frank H.T. Rhodes Class of '56 Professor Selection Committee 2009-13
faculty fellow, Carl Becker House, 2007-
member, University Courses Advisory Committee, 2011-
faculty liaison, Friends of Astronomy, 2012-
course/study tour leader, Cornell Adult University, on-campus class: 2013, study tour
Parma/Bologna: 2014, on-campus class: 2015, study tour, Flagstaff, Arizona, 2016
faculty speaker, Cornell Club of Southwest Florida & Cornell Club of Miami, 2015; Cornell
Club of the Berkshires 2016; Cornell Club of Sarasota-Manatee, 2017
faculty mentor for graduate student instructor of Freshman Writing Seminar, Astro 1110,
“Exploring our Cosmos”, L. Leisman, Fall 2015
faculty mentor, undergraduate summer research CienciasAmerica student J. Prada, 2015; D.
Bernal, 2016

Professional Society Service (selected):

vice president, International Astronomical Union, 2006-2012
ex-officio member, U.S. National Committee for IAU 2009-2012
member, National Academy of Sciences, Section 12 Nominating Committee, 2002-5, co-chair, 2003-5
chair, Henry Draper Medal Selection Committee, 2014; member, 2016
chair, James Craig Watson Medal Selection Committee, 2006
member, Arctowski Medal Selection Committee, 2009
member, Electorate Nominating Committee, Section on Astronomy, American Association for the Advancement of Science, 2012-14

National Advisory Committees (selected):

member, Astronomy and Astrophysics Advisory Committee, 2008-13
vice chair, 2011-2; chair, 2012-3
member, Board on Physics and Astronomy, National Research Council, 1991-3 and 2008-14
member, Division Committee, Engineering and Physical Sciences, National Research Council, 2003-7
vice-chair, 2010 Astronomy and Astrophysics Decadal Survey, National Research Council, 2008-10
member, Report Review Committee, National Research Council, 2007-13
member, National Academies NRC/IOM Portfolio Assessment Committee, 2014-5
member, National Academies NRC/Board on Physics & Astronomy Review Committee, 2015-6
vice-chair, NASA Astrophysics Performance Assessment Committee, National Research Council, 2006-7
member, Commission on Mathematics, Physical Sciences and Applications, National Research Council, 1998-2000
chair, Panel on Radio and Submillimeter Astronomy, Astronomy and Astrophysics Survey Committee, National Research Council, 1998-2000
member, Spectrum Planning and Policy Advisory Committee, National Telecommunications and Information Administration 1994-2000
US representative, OECD Global Science Forum on “Large Projects in Astronomy”, 2004
member, Oversight Committee, Kavli Foundation Conference Series: “U.S. Radio/Millimeter/Submillimeter Science Futures in the 2020’s”, 2015-

Institutional Boards and Visiting Committees:

member, Board of Trustees, Associated Universities, Inc. 1994-2016
Executive Committee 1996-2004, 2012-16, chairman of the Board 2000-4
chair, Strategic Planning Committee, 2004-14
member, ALMA Oversight Committee, 2005-16
member, ALMA Director Search Committee, 2008
member, Future of Radio Astronomy committee, 2007-8
member, Visiting Committee, Department of Astronomy, University of Maryland, 2009
member, Visiting Committee, Harvard--Smithsonian Center for Astrophysics, 2004-8, chair 2007-8

member, Visiting Committee, Division of Mathematics, Physics and Astronomy, California Institute of Technology, 2006
member, Visiting Committee, Department of Astronomy, University of Texas, 2017
member, Review Committee, Division of Engineering and Physical Sciences, National Research Council, 2012
member, Advisory Committee, Center of Excellence for All-Sky Astrophysics, University of Sydney (Australia) 2011-
member, Advisory Committee, Kavli Institute for Astronomy and Astrophysics, Peking University (China) 2014-
member, Advisory Committee, Netherlands Institute for Radio Astronomy, 2014-
trustee-at-large, Northeast Radio Observatory Corporation, 2006-
advisor to the Board, Combined Array for Research in Millimeter Astronomy, 2003-11
member, Advisory Committee, National Virtual Observatory, 2004-6
member of the Board, International Gemini Observatory, 1999-2002

Graduate Student Theses (as principal adviser)

1990	Wolfram Freudling, Ph.D., Cornell University
1990	Christopher Magri, Ph.D., Cornell University
1994	Tracey L. Evans, M.S., Cornell University
1995	Nicole P. Vogt, Ph.D., Cornell University
1996	Liese Van Zee, Ph.D., Cornell University
1997	Katherine P. Jore, Ph.D., Cornell University
2000	Elizabeth A. Barrett, M.Engr, Cornell University
2000	Katrin S. Hagemann, M.S., Cornell University
2001	David A. Kornreich, Ph.D., Cornell University
2005	Barbara Catinella, Ph.D., Cornell University
2005	Karen L. Masters, Ph.D., Cornell University
2006	Christopher M. Springob, Ph.D., Cornell University
2009	Sabrina Stierwalt, Ph.D., Cornell University
2011	Ann M. Martin, Ph.D., Cornell University
2013	Shan Huang, Ph.D., Cornell University
2014	Elizabeth A. K. Adams, Ph.D., Cornell University
2014	Gregory Hallenbeck, Ph.D., Cornell University
2016	Michael Jones, Ph.D., Cornell University
2017	Lukas Leisman, Ph.D., Cornell University (anticipated)

Current graduate student committees (member): 3 (V. Calafut, A. Godwardan, T.-K. Leung)

Undergraduate Advisor AY 2016-7

1 major and 9 other undergraduate students

Undergraduate Summer Research Mentor:

Summer 2016: David Bernal, Universidad de los Andes (Colombia), CienciasAmerica

Current AY 2016-7 Teaching

Spr 2017 Astro 2201 “The History of the Universe”
 taught under the Knight Institute Writing in the Majors program
 Astro 7620 “Advanced Radio Astronomy: Galaxy Formation and Evolution”
 co-taught with D. Riechers

Invited/Public Talks 2016-7 (Jan 1, 2016 to date or scheduled)

“*Extragalactic Sociology: The Intriguing Lives of Galaxies*”
Cornell Club of Southwest Florida, Naples, Dec 8, 2016
Cornell Club of Miami and the Florida Keys, Miami Beach, Dec 9, 2016

“*The Whirlpool, the Cartwheel and the Mice: The Intriguing Lives of Galaxies*”
Portsmouth, UK, Jan 6, 2016

“*Extragalactic HI Surveys: Results from ALFALFA and Plans for the SKA Pathfinders*”
Institute for Cosmology and Gravitation, University of Portsmouth, UK, Jan 7, 2016

“*ALFALFA and the SKA Pathfinders for HI in Galaxies*”
Royal Astronomical Society Specialist Discussion Meeting, London, Jan 8, 2016

“*Surveys of Gas in Galaxies*”
Department of Physics and Astronomy, Northwestern University, Jan 13, 2016

“*We are Stardust*”
Congreso del Futuro V, Santiago, Chile, Jan 22, 2016

“*Gas Reservoirs in Nearby Galaxies*”
Symposium on “What Shapes Galaxies”, Space Telescope Science Institute, Apr 25, 2016

“*Introduction to ALFA and ALFALFA*”
“*ALFALFA Followup with L-band Wide*”
“*Graduate School and Careers in Astronomy*”
Undergraduate ALFALFA Team workshop, Green Bank Observatory, June 13-17, 2016

“*Arizona: Eyes to the Skies over Flagstaff: Then and Now*”
Cornell Adult University Study Tour, Nov 1-5, 2016

Active Research and Education Support Grants

National Science Foundation AST/EXG (2011-2016)
“Harvesting ALFALFA: Tracking the Gas-Rich Halos at $z=0$ ”

Brinson Foundation (2007-)
“A Hunt for Starless Galaxies”

National Science Foundation AST/REU (2011-2017)
“REU Experience for Undergraduates in Astronomy and Astrophysics at Cornell University”

National Science Foundation AST/REU
“REU Site: Astrophysics and Planetary Science Research at Cornell University” (2017-), with A. Hayes (co-PI) (unofficial funding notification received)

CCAT Observatory (2016-)
“Telescope Feasibility Study”
“CCAT Project”
“CCAT Project II”

Publication list available upon request

Total publications:	477
Refereed publications:	262
Citations:	14,875
h-index:	68