

Chris Impey — Curriculum Vita

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1 Personal

Born: 25 January 1956, Edinburgh, Scotland
British Citizen; U.S. Permanent Resident

2 Education

B.Sc., Physics, 1977, University of London (1st Class Honors)

Ph.D., Astronomy, 1981, University of Edinburgh, Scotland

Thesis Title: Polarization Studies of BL Lac Objects

Thesis Directors: R.D. Wolstencroft and P.W.J.L. Brand

Foreign Languages: Spanish (strong) and French (fair)

3 Appointments

- **Research Assistant**, Centre European pour la Recherche Nuclear (CERN), Geneva, Switzerland, (May 1977 - October 1977)
- **Research Assistant**, University of Edinburgh and Royal Observatory, Scotland, (October 1977 - March 1981)
- **Science Research Council/NATO Fellow**, Research Associate, Institute for Astronomy, University of Hawaii, (March 1981 - June 1983)
- **Weingart Prize Fellowship**, California Institute of Technology, (June 1983 - August 1986)
- **Assistant Professor**, Steward Observatory, University of Arizona, (August 1986 - August 1991)
- **Associate Professor**, Steward Observatory, University of Arizona, (August 1991 - August 1996)
- **Associate Director**, NASA Space Grant, University of Arizona, (August 1991 - August 1995)
- **Visiting Professor**, Department of Astronomy, University of Washington, (August 1995 - August 1996)
- **Professor**, Steward Observatory, University of Arizona, (August 1996 - August 2000)
- **Deputy Department Head**, Department of Astronomy, University of Arizona, (August 1999 – July 2016)
- **University Distinguished Professor**, Steward Observatory, University of Arizona, (August 2000 -)
- **Honors Professor**, University of Arizona (March 2010 -)
- **Stanley Kelley Visiting Professor for Distinguished Teaching** (Princeton University, September 2011- July 2012)

- **Co-Director**, University of Arizona STEM Center, University of Arizona (August 2013-May 2016)
- **Associate Dean**, College of Science, University of Arizona, (May 2016 -)

4 Professional Honors and Awards

NATO/SERC Fellowship (University of Hawaii, 1981-83)

Weingart Prize Fellowship (California Institute of Technology, 1983-85)

Dudley Observatory Award (Dudley Observatory, 1990)

Slipher Award (National Academy of Sciences, 1998)

Distinguished Teaching Scholar (National Science Foundation, 2002)

Arizona Professor of the Year (Carnegie Foundation for the Advancement of Teaching, 2002)

Vice President, American Astronomical Society (2003-06)

Phi Beta Kappa Visiting Scholar (2006-07)

Richard H. Emmons Award for Excellence in College Astronomy Teaching (Astronomical Society of the Pacific, 2007)

Fellow of the American Association for the Advancement of Science (2009)

Stanley Kelley Visiting Professor for Distinguished Teaching (Princeton University, 2011-12)

Astronomical Society of the Pacific, Board of Directors (2011-14)

Anglo-Australian Observatory, Distinguished Visitor (2014)

Eugene Emme Literature Award, American Astronautical Society (2014)

Howard Hughes Medical Institute Professor (2014-19)

Gresham College Lecturer (London, England, 2016)

5 Professional Societies

American Astronomical Society, Former Vice President

Astronomical Society of the Pacific, Board of Directors

Royal Astronomical Society, Fellow

International Astronomical Union, Member

American Association for the Advancement of Science, Fellow

Russian Astronomical Society, Member

Royal College of Science, London, Associate

EDUCAUSE, Subscribing Representative

Phi Beta Kappa, Honorary Member

Science in Society, International Advisory Board

The Helix Center, New York, Advisory Board

Golden Key International Society, Honorary Member

National Speech and Debate Association, Advisory Board

6 Departmental Service

Colloquium Chairman (1986-89)
Graduate Admissions Committee (1987-99)
Steward Observatory TAC (1989-92)
Promotion and Tenure Committee (1991-97)
Vice-Weymann Search Committee (1988)
ASSIST Program Coordinator (1989-92)
Vice-White Search Committee (1991)
Academic Program Committee (1987-16)
Vice-Swihart Search Committee (1993)
Peer Teaching Evaluation Committee (1997-98)
Vice-Hoffman Search Committee (1998)
Honors Advisor (1994-99)
Graduate Advisor (1996-99)
Chair, Academic Program Review Committee (2000-02)
Chair, SMT and 12m Telescope Director Search (2002)
Business Manager Search Committee (2003)
Department Head Five-Year Review Committee (2003)
Promotion and Tenure Committee (2007-2010)
Academic Program Review Committee (2008)
Strategic Review Committee (2008)
Director Search Committee (2011)
Director of Development Search Committee (2012)
Chair, Theory Postdoc Selection Committee (2013)
Steward Observatory Council (1994-2013)
Academic Program Review Committee (2015)
Faculty and Research Staff Performance Evaluator (2007-16)
Faculty Search Committee (1999-16)
Deputy Head of Department (1999-16)
Chair, Academic Program Committee (1999-16)

Ph.D. Thesis Committees — S. Pompea, B. Jannuzi, H. Rix, D. Zaritsky, P. Smith (Univ. of New Mexico), P. Francis (University of Cambridge), K. McLeod, D. Sprayberry, B. McLeod, N. Dinshaw, T. Pickering, J. Scott, D. Norman (Univ. of Washington), C. Peng, R. Finn, D. McIntosh, K. Flint (UC Santa Cruz), J. Lee, A. Marble, M. Wold (Univ. of Copenhagen), B. Lei, K. Eriksen, M. O'Dowd (University of Melbourne), M. Prescott, J. Trump, J. Gabor, Y. Shi, B. Oppenheimer, A. Baleisis, J. Trump, W. Schlingman, C. Oliver (University of New South Wales), J. Donley, I. Momcheva, S. Buxner, K. Follette, E. Schneider, T. Sonam (College of Education), E. Cory (Dept. of Psychology), M. Simon (Department of Planetary Sciences), L. Brock (College of Education)

Prelim Committees — D. Foss, S. Pompea, B. Rice, H. Rix, D. Zaritzsky, K. McLeod, C. Liu, D. Sprayberry, E. Hooper, N. Dinshaw, L. Close, T. Pickering, C. Daubigny, C. Peng, R. Finn, A. Marble, J. Lee, K. Eriksen, B. Lei, M. Prescott, I. Momcheva, J. Trump,

J. Gabor, S. Cortes, K. Wong, E. Schneider, T. Sonam, M. Simon, L. Brock
M.Sc. Thesis Committees — K. Visnovsky, C. Clemens, K. Dow, C. Petry, V. Burkholder, L. Wells

7 University Service

Associate Director, NASA Space Grant Consortium (1990-95)
Faculty Senate, 5 terms (1991-93, 1993-95, 1998-00, 2000-02, 2002-04)
Instruction and Curriculum Policy Committee (1989-92)
Science Education Promotion and Tenure Committee (1991-94)
University Task Force on Academic Process (1992)
Faculty of Science Advisory Council (1992-95)
Faculty of Science Ad Hoc Budget Advisory Committee (1992)
University Calendar Committee (1991-97)
Instructional Computing Advisory Committee (1987-91, Chair 90-91)
Graduate College Representative (1991-99)
University Teaching Center Advisory Committee (1991-94)
Vice Provost for Academic Affairs Search Committee (1993)
Space Sciences Department Head Search Committee (1994)
Student Affairs Policy Committee (1994-95)
Faculty Representative - United Way (1988-90)
APEX Summer Workshop Lecturer (1990, 1991)
Academic Center for Excellence Advisor (1990-93)
Lecturer, Graduate Teaching Assistant Orientation (1994)
Faculty of Science Core Curriculum Committee (1994-95)
College of Science Student Awards and Scholarship Committee (1997)
Teaching Evaluator for the Humanities Program (1998-99)
NCA Accreditation Working Team - Mission Statement (1998-99)
University Teaching Awards Selection Committee (1999)
SAMEC Science Teachers Colloquium Series (1999)
Facilitator - Carnegie Campus Conversations (1999)
College of Science Associate Dean Search Committee (1999)
Strategic Planning and Budget Advisory Committee (1999-02, 2002-04)
University of Arizona "Pride Night," Phoenix (2000)
College of Science Dean Search Committee (2000)
Proposition 301 Optics Steering Committee (2000)
College of Nursing Faculty Development Workshop Panelist (2000)
Information Technology Council (1999-03)
Vice President for Undergraduate Education Search Committee (2001)
Center for Creative Photography Steering Committee (2001)
Integrated Learning Center Coordinating Team (2001)
Learning Technology Showcase Keynote Address (2001)
College of Humanities Promotion and Tenure Committee (2001)
SO/DA Astronomy Board Meeting, Presentation (2001)

GAT Orientation Facilitator (2002)
Emeritus Club Homecoming Lunch, Featured Speaker (2002)
Distinguished Professor Award Selection Committee, Chair (2002)
College of Science Galileo Circle Scholarship Committee (2003-05)
Faculty Fellows Speakers Series (2003)
MCB Academic Program Review, College Representative (2003)
College of Science Promotion and Tenure Committee (2003-06)
CATTS Career Panelist (2003)
Steward Observatory Director Five-Year Review Committee (2003)
EDUCAUSE Subscribing Representative (2003-04)
UA Arizona Science Center Architect Selection Committee (2004)
Organizer “Astrobiology and the Sacred” Public Lecture Series (2004-08)
College of Science “Evolution” Lecture Series Organizing Committee (2005)
School of Architecture Program Review (2005)
Advisory Committee, Western Humanities Alliance Conference (2005)
College of Science MRI Proposal Review Committee (2006)
UA Alumni Association Eclipse Cruise, Scientific Leader (2006)
SO/DA Astronomy Board Meeting, Presentation (2006)
College of Science Global Change Series Organizing Committee (2006)
Regents and Distinguished Professors Council (2006-)
GAT Orientation Workshop Leader (2007)
Arizona Astronomy Board, Presenter (2007)
College of Science “Edges of Life” Lecture Series Organizing Committee (2007)
B2 Institute Educational Retreat, Biosphere (2007)
Faculty Review Committee, Bureau of Applied Anthropology (2007)
UA Alumni Association Chile Astronomy Tour, Scientific Leader (2008)
GAT Orientation Workshop Leader (2008)
Office of Student Computing TV Show (2008)
Group for Early Modern Studies Lecture/Panel (2008)
UA Transformation White Paper, lead author (2008)
College of Science “Next” Lecture Series Organizing Committee (2008)
Congresswoman Giffords “Science and Technology Luncheon,” co-host (2008)
Group for Early Modern Studies, Member (2008-13)
UA Intellectual Policy Committee (2008-10)
Arizona Astronomy Board, Presenter (2009)
SO/DA Astronomy Board Meeting, Presentation (2009)
College of Science Center for Astrobiology Steering Committee (2009-12)
Creator, “Teach Astronomy” General Education Web Site (2010-)
Arizona Astronomy Board, Presenter (2010)
Mount Lemmon Science Center Advisory Committee (2010-12)
Department of Chemistry and Biochemistry Academic Program Review (2010)
College of Science “Cosmic Origins” Lecture Series Organizing Committee (2010)
Anthem Veterans Memorial, Scientific Consultant (2011)
Steward Observatory Director Search Committee (2011)

Arizona Astronomy Board, Presenter (2011)
Tucson Downtown Science Center, Advisor (2011)
College of Science “Living Beyond 100” Lecture Series Organizing Committee (2011)
STEM Learning Center Steering Committee (2011-13)
Arizona 100 Celebration, Centennial Hall Presenter (2012)
College of Science “Galileo Circle” Italy Tour Leader (2012)
UA Academic Leadership Institute (2012-13)
College of Science Ad Hoc E-Learning Committee (2012-13)
University of Arizona Provost Search Committee (2012-13)
Biosphere 2 “Artist in Residence” Advisory Board (2012-13)
Henry Koffler Prize Selection Committee (2013)
Responsibility Centered Management (RCM2) Subcommittee (2013)
Arizona Space Grant, “Science Literacy” Lunch Presentation (2013)
AAU Undergraduate STEM Project Steering Committee (2013)
Co-Director, STEM Learning Center (2013-16)
Alexandrian Circle/Libraries Fundraiser (2014)
Campaign Kickoff/College of Science Faculty Talk (2014)
STEM Conference for Early Childhood Educators Welcoming Address (2014)
Circle of Books Clubs, Pima County Libraries/Flandrau Planetarium, Presentation (2014)
STEMazing Early Childhood Conference, Welcoming Address (2014)
Osher Lifelong Learning Institute “Classics of Science Fiction” Class, Guest Lecture (2014)
Osher Lifelong Learning Institute “Astrobiology” Class, Guest Lecture (2014)
University of Arizona Press, Editorial Advisory Board (2014-)
Intellectual Policy Discussion Group (2014-16)
EPO Lead, NASA Astrobiology Program “Earths in Other Solar Systems” (2015-)
Arizona Board of Regents, Breakfast Discussion (2015)
College of Science Commencement Speaker (2015)
Flandrau Planetarium Art Exhibit Opening, Guest Speaker (2015)
Strategic Planning Workshop on Space Systems, Guest Speaker (2015)
Eller College, Department of Marketing “Creative Bash,” Guest Speaker (2015)
Massive Open Online Classes: Design, Development, Delivery, Panelist (2015)
Start-Up Tucson, Innovation Rocket Talks, “Innovation in Education” (2015)
Science Communication Summit, College of Science (2016)
Engaging Undergraduates: Broader Impacts, Panelist (2016)

8 Astronomy Service

Kitt Peak Bright Time Allocation Committee (1994-96)
Space Telescope Cycle 5 Active Galactic Nuclei Panel (1994)
American Astronomical Society Shapley Lecturer (1993-)
NASA Long Term Space Astrophysics Review Panel (1995)
Kitt Peak Extragalactic Time Allocation Committee (1996-97)
Space Telescope Cycle 8 Quasars Absorption Lines Panel, Chair (1998)

Space Telescope Cycle 8 Time Allocation Committee (1998)
Organizing Committee, IAU Colloquium 171, The Low Surface Brightness Universe (1998)
Organizing Committee, ASP Conference 189, Teaching Introductory Astronomy (1998)
Organizer, Vatican Observatory Science and Education Conference (1998)
NOAO Long Term Proposal Time Allocation Committee (1999-00)
Columbia University Biosphere-2 Advisory Board (1999-01)
Space Telescope Users Committee (1999-02)
NSF Extragalactic Astronomy Review Panel (2000)
NASA Chandra Observatory Cycle 2 Time Allocation Committee, Chair (2000)
NASA Chandra Observatory Cycle 2 Budget Review Panel (2000)
Astronomy Education Review Editorial Board (2001-05)
NASA Spitzer Observatory Cycle 1 Time Allocation Committee (2003)
NSF Distinguished Teaching Scholars Review Panel (2003)
Vice President, American Astronomical Society (2003-06)
American Astronomical Society Executive Committee (2003-06)
American Astronomical Society Membership Committee (2003-04)
Lead Scientific Organizer, 206th and 207th Meetings of the AAS (2005-06)
NASA Spitzer Observatory Cycle 2 Time Allocation Committee (2003)
Judge, Livio Gratton Prize for best Italian Astronomy Ph.D. (2003)
NASA Hubble Fellowship Selection Panel (2004)
University of Washington Astrobiology Program Review (2005)
University of Toronto Astronomy Program External Evaluator (2006)
Scientific Steering Committee, COSMOS Collaboration (2005-12)
International Executive Committee, INSAP 5 Conference, Chicago (2005)
American Astronomical Society, Chambliss Writing Award Committee, Chair (2006)
NASA Chandra Observatory Cycle 8 Time Allocation Committee, Chair (2006)
NASA Chandra Observatory Cycle 8 Budget Review Panel (2006)
Editorial Board, Encyclopedia of the Cosmos (2006-09)
KPNO Director Search Committee (2006)
Nominator, Nobel Prize in Physics (2007)
Nominator, Kyoto Prize in Basic Sciences (2007)
Organizing Committee, IAU Symposium 244, Dark Galaxies and Lost Baryons (2007)
LSST Mirror Casting “High Fire Event” Tour Guide (2008)
Organizing Committee, Astrobiology Workshop: Expanding Views of Society and Self (2008)
NASA Keck Observatory Time Allocation Committee, Origins Panel (2008-10)
International Executive Committee, INSAP 6 Conference, Venice (2009)
“365 Days of Astronomy” Podcast, Beyond Vision (2009)
Organizing Committee, Vatican Observatory SuperVOSS III Conference (2009)
Organizing Committee, Pontifical Academy “Study Week in Astrobiology” (2009)
Science for Monks Program, India, Cosmology Organizer and Lecturer (2008-13)
Metanexus Global Network Initiative, Advisory Council (2008-10)
Decadal Survey 2010, Education and Public Outreach Study Group, co-Chair (2009)
APS/AAPT “Using Astronomy to Teach Physics” Project Advisor (2010-12)
“365 Days of Astronomy” Podcast, Earth Clones (2010)

Dark Matter Awareness Week, Speaker (2010)
International Executive Committee, INSAP 7 Conference, Bath (2010)
Physics World, Top Physics Books of 2010, for “How It Ends”
“365 Days of Astronomy” Podcast, Life on Titan (2011)
Board of Directors, Astronomical Society of the Pacific (2011-13)
Cosmology and Consciousness I, Co-organizer and Panelist, Dharamsala, India (2011)
Gordon Research Conference, Physics Research and Education, Advisory Panel (2011)
National Science Foundation, Astronomy “Portfolio Review” Committee (2011-12)
Science and Entertainment Exchange, Consultant (2011-15)
The Art and Craft of Science Writing, Princeton University, Organizer (2012)
Communicating Science, ASP Annual Meeting, Local Organizing Committee (2012)
Astronomical Society of the Pacific, Publications Committee (2012-15)
Astronomical Society of the Pacific, Awards Committee (2012-15)
Inigo Films “Star Men,” Scientific Consultant (2012-16)
College of Science, “Science and Screen,” Local Organizing Committee (2012)
Exoplanets, Biomarkers, and Instruments, Tucson, Organizing Committee (2013)
Astronomical Society of the Pacific “Cosmos 2013” Program Committee (2013)
Cosmology and Consciousness II, Co-organizer and Panelist, Dharamsala, India (2013)
NOVA “Exoplanets and Astrobiology” Program, Consultant (2013)
NPR “Science Friday” Life in the Universe, Story Consultant (2013)
Vatican Observatory Advisory Committee (2013-)
Astrobiology and Society Focus Group, SETI Institute (2013-)
Associate Editor, International Journal of Science and Society (2013)
Anglo-Australian Observatory, Distinguished Visitor Program (2014)
Vatican Observatory Research Report, co-author, presented to Pope Francis (2014)
Scientific Organizing Committee, Search for Life Beyond the Solar System (2014)
Press Liaison, Search for Life Beyond the Solar System (2014)
NASA Hubble Fellowship Selection Panel (2014)
Howard Hughes Medical Institute Professor, Finalist and Presenter (2014)
Nominator, Kyoto Prize in Basic Sciences (2014)
Nominator, The Crafoord Prize on Astronomy (2015)
“365 Days of Astronomy” Podcast, Before First Light (2015)
“365 Days of Astronomy” Podcast, First Light (2015)
“365 Days of Astronomy” Podcast, Last Light (2015)
Advisory Board, Emory-Tibet-Science Initiative, Emory University (2015-)
Templeton Foundation, Big Questions Advisory Board (2015-)
Disney Television Network, “Miles from Tomorrowland” Consultant (2015)
IAU Commission on Astronomy Education and Development, Elected Member (2015-)
IAU Education Working Group on Theory and Methods of Astronomy Education (2015-)
Cosmology and Consciousness IV, Co-organizer and Panelist, Bylekuppe, India (2015)
Physics World, Top Physics Books, for “Beyond: Our Future in Space” (2015)
Nominator, MacArthur Prize Fellowship (2016)
Space Consultant, Strategic Studies Group, Department of the Navy (2016)
“365 Days of Astronomy” Podcast, Moon Mars and Beyond (2016)

“365 Days of Astronomy” Podcast, The Impending Space Boom (2016)
“365 Days of Astronomy” Podcast, The Middle Kingdom Up There (2016)
“365 Days of Astronomy” Podcast, Go Boldly Go Small (2016)
“365 Days of Astronomy” Podcast, When We Become Aliens (2016)
International Astronomical Union, Working Group, Astrobiology Education and Training (2016-)
Messaging Extraterrestrial Intelligence, International Advisory Board (2016-)

Book Reviewer for Mercury Magazine, Physics Today; and American Scientist Magazine

Proposal Reviewer for Cambridge University Press and Princeton University Press

Associate Editor, International Journal of Science and Society

International Editorial Board, Euresis Journal

Reviewer for Leonardo Magazine, Astronomy Education Review, MacArthur Foundation,
Science and Society International Journal

Referee for Astrophysical Journal, Astrophysical Journal Letters, Astronomical Journal, Monthly
Notices of the Royal Astronomical Society, Nature, Publications of the Astronomical
Society of the Pacific, Astronomy and Astrophysics, Astrophysics and Space Science.

Research Proposal Reviewer for NASA, NSF, the Templeton Foundation, Research Corporation,
British PPARC, Italian CNR, Czech Science Foundation, NATO, Canada Natural Sciences
and Engineering Research Council, the Netherlands Organization for Scientific Research,
the Austrian Science Fund, the European Research Council, the Chilean Research Council,
the Chinese Telescope Access Program.

Seven popular books on astronomy have between them been translated into ten languages: Dutch,
Greek, Italian, Japanese, Korean, Portuguese, Spanish, Turkish, Arabic, and Chinese.

9 University Teaching Awards and Grants

1988 Faculty of Science **Distinguished Teaching Award** (\$ 1000)

1989 Provost's **Teaching Improvement Award** (\$ 1830)

1991 **Burlington Resources Foundation Achievement Award** (\$ 2500)

1992 **General Education Teaching Award** (\$ 8000)

1992 Provost's **Teaching Improvement Award** (\$ 2000)

1996 **Faculty Development Grant** (\$ 6000)

1997 **New Instructional Technologies Grant** (\$ 3500)

1997 El Paso Energy Foundation **Faculty Achievement Award** (\$ 3000)

1998 **New Learning Environments and Instructional Technologies Grant** (\$ 14,890)

2000 **New Learning Environments and Instructional Technologies Grant** (\$ 22,288)

2000 **University Distinguished Professorship** (\$ 5000)

2001 **New Learning Environments and Instructional Technologies Grant** (\$ 24,563)

2003 **Internet Technology, Commerce and Design Institute Grant** (\$ 15,000)

2004 **Henry and Phyllis Koffler Prize for Teaching** (\$ 10,000)

2004 **Galileo Circle Fellow** (\$5000)

10 Teaching Experience

Astronomy 100, **Essentials of Astronomy** (Spring 1987), 168 students
Astronomy 100, **Essentials of Astronomy** (Fall 1987), 182 students
Astronomy 100, **Essentials of Astronomy** (Fall 1987), 175 students
Astronomy 100, **Essentials of Astronomy** (Fall 1988), 170 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1989), 14 students
Astronomy 396H, **Honors Seminar** (Fall 1989), 15 students
Astronomy 100, **Essentials of Astronomy** (Fall 1990), 154 students
Astronomy 100, **Essentials of Astronomy** (Fall 1990), 152 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1991), 15 students
Astronomy 396H, **Honors Seminar** (Fall 1991), 8 students
Astronomy 100, **Essentials of Astronomy** (Spring 1992), 152 students
Astronomy 396H, **The Personalized Universe** (Spring 1992), 10 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1993), 16 students
Astronomy 396H, **Honors Seminar** (Spring 1993), 12 students
Astronomy 100, **Essentials of Astronomy** (Fall 1993), 153 students
Astronomy 100, **Essentials of Astronomy** (Fall 1993), 155 students
Astronomy 100, **Essentials of Astronomy** (Fall 1994), 165 students
Astronomy 396H, **Honors Seminar** (Fall 1994), 13 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1995), 9 students
Arts & Sciences 195A, **Life in the Universe** (Spring 1995), 9 students
Astronomy 101 (University of Washington), **Astronomy** (Fall 1995), 250 students
Astronomy 100, **Essentials of Astronomy** (Fall 1996), 165 students
Astronomy 100, **Essentials of Astronomy** (Fall 1996), 65 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1997), 8 students
Astronomy 100, **Essentials of Astronomy** (Fall 1997), 163 students
Natural Sciences 102, **The Physical Universe** (Fall 1998), 151 students
Natural Sciences 102, **The Physical Universe** (Fall 1998), 166 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 1999), 12 students
Natural Sciences 102, **The Physical Universe** (Fall 1999), 162 students
Natural Sciences 102, **The Physical Universe** (Fall 2000), 166 students
Natural Sciences 102, **The Physical Universe** (Fall 2000), 156 students
Astronomy 541, **Extragalactic Astronomy and Cosmology** (Spring 2001), 13 students
Natural Sciences 102, **The Physical Universe** (Fall 2001), 189 students
Astronomy 202, **Life in the Universe** (Spring 2002), 106 students
Astronomy 202, **Life in the Universe** (Spring 2003), 122 students
Natural Sciences 102, **The Physical Universe** (Fall 2004), 154 students
Astronomy 202, **Life in the Universe** (Spring 2006), 105 students
Astronomy 202, **Life in the Universe** (Spring 2007), 104 students
Astronomy 202, **Life in the Universe** (Spring 2008), 103 students
Astronomy 202, **Life in the Universe** (Spring 2009), 115 students
Astronomy 202, **Life in the Universe** (Spring 2010), 111 students
Natural Sciences 102, **The Physical Universe** (Spring 2011), 153 students

Honors Seminar 195i, **Living in the Universe** (Spring 2011), 12 students
 Astronomy 105 (Princeton University), **The Living Cosmos** (Fall 2011), 70 students
 Astronomy 542 (Princeton University), **Cosmology Seminar** (Spring 2012), 26 students
 Astronomy: State of the Art (Spring 2013), **Udemy MOOC**, 31,650 students
 Astronomy 170B1, **The Physical Universe** (Spring 2014), hybrid class, 62 students
 Astronomy 170B1, **The Physical Universe** (Spring 2015), hybrid class, 143 students
 Astronomy: Exploring Space and Time (Spring 2015), **Coursera MOOC**, 30,924 students
 Astronomy 170B1, **The Physical Universe** (Fall 2015), online class, 22 students
 Astronomy: Exploring Space and Time (Fall 2015), **Coursera MOOC**, 9,470 students

11 Student Advising

Astronomy Graduate Thesis Advisor :

K. Visnovsky (M.Sc. 1990)
 D. Sprayberry (Ph.D. 1994)
 N. Dinshaw (Ph.D. 1996)
 E. Hooper (Ph.D. 1997)
 C. Petry (M.Sc. 1998)
 T. Pickering (Ph.D. 1998)
 V. Burkholder (M.Sc. 1999)
 L. Wells (M.Sc. 1999)
 D. Norman (Univ. Washington, Ph.D. 1999)
 K. Flint (with M. Bolte, UC Santa Cruz, Ph.D. 2001)
 R. Finn (with D. McCarthy, Ph.D. 2003)
 C. Peng (Ph.D. 2004)
 J. Lee (with R. Kennicutt, Ph.D. in 2006)
 A. Marble (Ph.D. in 2007)
 B. Lei (with G. Reike, Ph.D. in 2007)
 K. Eriksen (with D. Arnett, Ph.D. in 2009)
 M. Prescott (with R. Kennicutt, Ph.D. in 2009)
 J. Trump (Ph.D. in 2010)
 J. Gabor (with R. Dave, Ph.D. in 2010)
 E. Schneider (3rd year, with B. Robertson)
 T. Sonam (Education, with B. Johnson)
 M. Simon (Planetary Sciences, with I. Pascucci)
 L. Brock (Education, with B. Johnson and E. Prather)

Research Assistants (L. Sauter, C. Petry, K. Flint, C. Liu, K. Louie, D. Zaha, D. Huber, L. Robb, J. Watson, C. King, E. Johnson, J. Antonellis, E. Brogt, S. Buxner, P. Griffis, H. Sugarman, J. Antonellis, K. Hardegree-Ullman, K. Tijerino, J. Romine, M. Nieberding, R. Eckley, W. Chavez, D. Pickel, M. Formanek, M. Paul, T. Sonam, L. Brock)

Senior Honors Thesis Advisor (K. Flint, C. Hutcheson, I. Carlstrom, C. Casey)

NASA Space Grant Undergraduate Research Interns (R. Gordy, L. Kaehler, A. McCarthy, A. Braglia, M. Brown, M. Pesce-Rollins, A. Marchand, J. Peake, J. Llull)

- Independent Studies 399/499/599 (M. Elowitz, J. Ash, A. Moustakis, K. Flint (Honors), J. Parker, D. Norman, L. Mendoza, S. Lyons, K. Louie, R. Diaz (Honors), S. Floto, J. Jensen, M. Kochis, J. Lohmiller, L. Truong, P. Farrell, J. Goldin, E. Martinez, M. Preis, K. Less, S. Selby, P. Tautz, J. Romero, J. Romine, M. Neiberding)
- Web Project Undergraduates and Graduate RAs (D. Washburn, G. MacArthur, A. Schultz, D. Irvin, L. Knudson, J. Weiner, J. McConnell, J. Dannemiller, F. Lin, R. Martinez, R. Upallapati, C. Copeland, J. Cain, D. Rudd, B. Engineer, S. Sarnikar, U. Engineer, A. Malik, A. Gupta, K. Peterson, A. Achrekar, S. Choraria, B. Shean, S. Shahapurkar, U. McDuffee, A. Permar, B. Schmidt, A. Camp, J. Hoy, B. Ganesan, E. Courche, P. Guptan, A. Kumar, M. Kaufmann, A. Permar, B. Ganesan, A. Gnanamani, C. Cubach, J. Russell, P. Yang, E. Hardegee, K. Hardegee, T. Anchondo, N. Shastri, J. Naranajan, N. Chandrasekharan, R. Sheshu, J. Hall, S. Shastri, A. Patikkal, A. Aronoff, M. Swatzell, B. Guvenen, A. Srinathan, J. Parchment, N. Gopaul, C. Austin, N. Ganesan, M. Paul, K. Dunn, R. Eckley, S. Ravishankar, D. Pickel, Y. Serrano, V. Elias, R. Tombleson, A. Mththew, B. Brown, Z. Watson, J. Calahan, S. Nuno, K. Libby, T. Genovese, H. Eckstrom, A. Baucco, J. Ritter, S. Clement, A. Rathore, S. Mocherla)
- Teach Astronomy Web Project for Graduate Curricular/Optional Practical Training (R. Sheshu, V. Datla, A. Kaya, A. Patikkal, S. Ravishankar, R. Srinivasaraghavan, S. Ravishankar, and A. Mathew)
- Gen. Ed. Preceptors (E. Adnan, A. Ainsa, K. Beatty, C. Copeland, J. Coskey, D. Elerath, P. Farrell, S. Floto, C. Jacks, J. Jensen, S. Monroe, G. Morgenstern, J. Simoneaux, A. Viggiano, J. Williamson, M. Zilm, B. Zura, C. Lindblom, N. Orr, W. Cheama, J. Goldin, E. Martinez, D. Roberts, S. Anderson, C. Tharp, B. White, M. Magzen, R. Barrios, C. Heyman, T. Lazarus, J. Ryan, J. Mitchell, J. Carli, N. Brennan, M. Bassin, A. Westle, J. Weiss, J. Hardy, E. Higley, T. Palomares, J. Villagomez, R. Mondrus, G. Macias, M. Girrdina, J. Danziger, A. Phillips, L. Echevarria, M. D'Souza, H. Girn, N. Bajema, J. Sprigg, B. Filippi, D. Huber, E. Rodriguez, A. Estorga, A. Cruz, G. Gephart, M. Davis, Z. Durst, A. Kristof, B. Turpen, A. Vega, E. Olivar, M. Rodgers, A. Thomas, A. Medina, C. Owen, D. Green, N. Romero, S. Kenter, R. Eckley, C. Meyers, F. Sifuentes, A. Scheck, K. Terry, L. MacTaggart, J. Ritter, K. Shacklett, J. Vasquez)
- Staff Employees (Cathy Petry – Senior Research Associate 1990-2003, Katherine Larson – Program Coordinator 2005-07, Adrienne Gauthier – Senior Instructional Technology Specialist 2003-11, Anand Patikkal, Senior Web Developer, 2009-12, Kevin Hardegree-Ullman, Instructional Technology Specialist 2011-12, Taylor Fay Genovese, Theatrical Technical Assistant, 2015-16, Carmen Henley, Senior Writer, 2012-16, Mathew Wenger, Education Program Manager, 2012-current)
- Co-advisor to 32 M.Sc. teacher-students in NSF ASSIST Program (1990-93)
- Overall responsibility for 235 NASA Space Grant Research Interns (1991-95)
- TUSD Professional Intern Program (P. Slatkin)
- Advisor, Senior Exit Project, Cienega High School (K. Pavlica)
- Faculty Mentor, Flinn Fellow (K. Flint, A. Dvorak)
- Academic Center for Excellence Faculty Advisor (1990-93)
- GIDP Graduate Student Advisor (Michelle Lanan, Jaime Parchment, Nellie Gopaul)
- Student Organization Faculty Advisor (Gamers Club, Pi Rho)

Astronomy Honors Advisor (1994-99)
Graduate Advisor for 45 Ph.D. students (1996-99)
Faculty Fellow, Forbes College, University of Princeton (2011-12)
Academic Head for 45 Ph.D. students and 100 astronomy majors (1999-16)
Honors Professor, University of Arizona (2010-)

12 Observing Experience

Optical Telescopes: Keck I, Keck II, Subaru 8m, Gemini-N, Magellan I, Magellan II, SAO 6m, Palomar 5m, MMT, KPNO 4m, CTIO 4m, AAT, CFHT, IRTF, Las Campanas 2.5m, KPNO 2.3m, Steward 2.2m, Hawaii 2.2m, SAAO 2m, WIYN, UKST, plus many under 2m
Radio Telescopes: Arecibo, VLA, Green Bank 45m
X-Ray and Far Infrared: IRAS, HEAO-2, ROSAT, ISO Key Project, XMM-Newton, Chandra
Hubble Space Telescope: PI or co-PI on 26 projects totaling over 2000 orbits; user of WFPC2, FOS, GHRS, STIS, ACS, and NICMOS

13 Invited Educational Presentations

1987 Flandrau Planetarium **Eyes on the Universe** Lecturer
1989 Flandrau Planetarium **Eyes on the Universe** Lecturer
1991 **Smithsonian Visiting Associates** Lecturer
1991 Flandrau Planetarium **Eyes on the Universe** Lecturer
1991 **H.M.S. Southward** Eclipse Cruise Enrichment Lecturer
1992 **Smithsonian Visiting Associates** Lecturer
1992 University of Arizona **Summer Session Distinguished Lecturer**
1992 Astronomical Society of the Pacific **Universe '92** Invited Speaker
1993 **Smithsonian Visiting Associates** Lecturer
1993 Steward Observatory Public Evening Lecturer
1993 American Astronomical Society **Shapley Visiting Lecturer** (Ft. Lewis College, Colorado)
1994 **Smithsonian Visiting Associates** Lecturer
1994 Steward Observatory Public Evening Lecturer
1994 Astronomical Society of the Pacific **Universe '94** Invited Speaker
1994 American Astronomical Society **Shapley Visiting Lecturer** (Hartnell College, California)
1995 American Astronomical Society "Seminar for Science Writers" at 185th Meeting, Tucson
1995 American Astronomical Society "Astronomer for a Day" at 185th Meeting, Tucson
1995 **Research Corporation** "Partners in Science" Conference Plenary Speaker
1995 Steward Observatory Public Evening Lecturer
1995 **Vatican Observatory** 5th Summer School in Astronomy and Astrophysics, Lecturer
1995 **Dinosaur Day Exhibition** Lecturer, Hartnell College, Salinas
1996 Astronomical Society of the Pacific **Universe '96** Invited Speaker
1996 **Smithsonian Visiting Associates** Lecturer

- 1996 **Phi Beta Kappa** Banquet Speaker
- 1996 Steward Observatory Public Evening Lecturer
- 1997 Steward Observatory Public Evening Lecturer
- 1998 **Technology Enabled Learning Conference** Showcase Presenter
- 1998 Hayden Planetarium **Frontiers in Astrophysics** Lecturer
- 1998 **Smithsonian Visiting Associates** Lecturer
- 1998 Astronomical Society of the Pacific's "Symposium on Teaching Astronomy" Panelist, Albuquerque
- 1998 Wake Forest University **Computer-Enhanced Teaching** Vignette
- 1998 Steward Observatory Public Evening Lecturer
- 1998 **NASA Space Grant Consortium Symposium** Plenary Speaker
- 1998 **Joint Center for the Study of Time in Physics and Cosmology** Seminar Series
- 1999 Conference on "Inspiration of Astronomical Phenomena II" in Malta Keynote Speaker
- 1999 University of Arizona Community Speaker Series
- 1999 **Merged Realities: A Synthesis of Art and Science** Symposium
- 1999 University of Arizona Extended University, SAGE Retreat speaker
- 1999 American Astronomical Society **Harlow Shapley Visiting Lecturer** (College of the Rockies, Kelowna, Canada)
- 1999 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Okanagan College, Cranbrook, Canada)
- 1999 American Association of Physics Teachers, Arizona Spring Meeting
- 1999 University of Arizona Community Speaker Series
- 1999 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Orange Community College, Costa Mesa, California)
- 1999 University of Arizona Science Teachers Colloquium Series
- 1999 **Smithsonian Visiting Associates** Lecturer
- 2000 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Western Washington College, Walla Walla, Washington)
- 2000 11th International Conference on College Teaching and Learning, Jacksonville, Florida
- 2000 Astronomical Society of the Pacific **Universe 2000** Invited Speaker
- 2000 Columbia Biosphere 2 "Summer of Stars" Lecturer
- 2000 Astronomical Society of the Pacific's "Higher Education Symposium" Invited presenter, Pasadena, California
- 2000 Texas Astronomy League, Invited speaker
- 2000 Santa Fe Planetarium **Current Research Series**
- 2000 LodeStar Planetarium, Albuquerque, Public Lecture
- 2000 **Smithsonian Visiting Associates** Lecturer
- 2001 Conference on "Inspiration of Astronomical Phenomena III" in Sicily, Keynote Speaker
- 2001 Columbia Biosphere 2 Public Lecture Series
- 2001 W.M. Keck Observatory Public Evening Lecture
- 2001 Stockholm Observatory Public lecture
- 2001 University of North West, South Africa, Public Lecture Series
- 2002 Steward Observatory Public Evening Lecturer
- 2002 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Loyola College,

Baltimore, Maryland)

- 2002 **ASP Public Symposium** "From Stars to Life" Invited Speaker
- 2002 University of Arizona Alumni Homecoming Lunch Speaker
- 2002 UA School of Architecture "Intuition - Hapticity" Invited Speaker
- 2002 Harvard University Alumni Club Speaker
- 2002 Arizona Board of Regents meeting, Featured Faculty Speaker
- 2003 **201st AAS Meeting** "Teaching with Electrons" Invited Speaker
- 2003 National Science Foundation **MPS Distinguished Lecture**
- 2003 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Southern Utah University, Cedar City)
- 2003 University of Arizona Faculty Fellows Speakers Series
- 2003 Hartnell College, Salinas, California, Planetarium Re-Opening, Guest Speaker
- 2003 **Smithsonian Visiting Associates** Lecturer
- 2003 American Astronomical Society **Harlow Shapley Visiting Lecturer** (UNAM/INAOE, Mexico City, Mexico)
- 2003 NSF Teacher-Leaders in Research Based Science Education Invited Speaker
- 2003 **Society for College Science Teachers** Mini-Conference Speaker
- 2003 Princeton University "Council on Science and Technology" Invited Speaker
- 2003 Hayden Planetarium "Frontiers in Astrophysics" Lecturer
- 2003 **Observatorio Nacional, Rio de Janeiro** VIII Winter School Lecturer
- 2003 National Science Foundation Office of Legislative and Public Affairs "The Universe from the Ground Up" Symposium Summary Speaker
- 2003 American Astronomical Society **Harlow Shapley Visiting Lecturer** (California State University, Northridge)
- 2003 Arizona Conference on "Exemplary Science Courses" Speaker, Pima Community College
- 2004 University of Arizona Faculty Community Lecture
- 2004 American Physical Society "Four Corners Meeting" Invited Speaker
- 2005 Hayden Planetarium "Frontiers in Astrophysics" Lecturer
- 2005 **Western Humanities Alliance** Conference on "Borders," Plenary Speaker
- 2005 Flandrau Science Center "Hubble Space Telescope Anniversary" Invited Speaker
- 2005 **Astronomical Society of the Pacific** Annual Awards Dinner, Banquet Speaker
- 2005 **Vatican Observatory** 9th Summer School in Astronomy and Astrophysics, Lecturer
- 2005 ASP Annual Meeting "Building Community: The Emerging EPO Profession, Award Dinner Banquet Speaker
- 2006 **Vatican Observatory Foundation** Fund-Raiser, Banquet Speaker
- 2006 Summer School on "New Techniques and New Progress in Observational Astrophysics," Lecturer, Beijing National Observatory, Beijing, China
- 2006 **The Reinvention Center**, "Transforming the Culture: Undergraduate Education and the Multiple Functions of a Research University," Workshop Leader, Washington, D.C.
- 2006 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Lawrence University, Northridge)
- 2006 **Phi Beta Kappa Visiting Scholar**, Ohio University, Athens, Ohio
- 2006 **Phi Beta Kappa Visiting Scholar**, Ohio Wesleyan University, Delaware, Ohio
- 2006 **Phi Beta Kappa Visiting Scholar**, Wells College, Aurora, New York

- 2006 **Phi Beta Kappa Visiting Scholar**, Alfred University, Alfred, New York
- 2006 Spirit of the Senses Salon, “Life in the Universe,” Phoenix, Speaker
- 2006 College of Science Evolution Lecture Series, Speaker
- 2006 **St. Albert’s Forum on Theology and Science**, Tucson, Lecturer
- 2006 Tucson Amateur Astronomers Association, Lecturer
- 2006 Arizona Senior Academy, Invited Speaker
- 2006 Pale Blue Dot III, Adler Planetarium, Chicago, Illinois
- 2006 **Penny W. Stamps Distinguished Visitor Series**, Speaker, University of Michigan, School of Art and Design
- 2007 Phoenix Science Center, Evolution Lecture Series, Speaker
- 2007 **Phi Beta Kappa Visiting Scholar**, Allegheny College, Meadville, Pennsylvania
- 2007 **Phi Beta Kappa Visiting Scholar**, Bucknell University, Lewisburg, Pennsylvania
- 2007 **Phi Beta Kappa Visiting Scholar**, Southwestern University, Georgetown, Texas
- 2007 **Phi Beta Kappa Visiting Scholar**, University of Oregon, Eugene, Oregon
- 2007 Spirit of the Senses Salon, “The Big Bang,” Phoenix, Speaker
- 2007 Phi Beta Kappa Tucson Chapter, Speaker
- 2007 UA Science Center “Got Science?” Café, Inaugural Speaker
- 2000 UA “First Level” Honors Award Ceremony Speaker
- 2007 UA CATS/BioME Fellows, Guest Speaker
- 2007 UA Phi Beta Kappa Initiation Ceremony, Speaker
- 2007 Plenary Speaker, ASP “Cosmos in the Classroom” Pomona, California
- 2007 Spirit of the Senses Salon, “Science in Second Life,” Phoenix, Speaker
- 2007 **Adler Planetarium** “Far Out Friday” Lecturer, Chicago
- 2007 **Hayden Planetarium** Author Lecture Series, New York City
- 2008 NASA Arizona Space Grant, Lunch Speaker
- 2008 The Learning Curve, Tucson, Guest Speaker
- 2008 **American Scientist Magazine** “Scientist’s Bookshelf”
- 2008 LSST Mirror Casting “High Fire Event,” Tour Guide
- 2008 Astrobiology Science Conference (AbSciCon), Santa Clara, California
- 2008 Pima Community College “Lecture under the Stars”
- 2008 Catalina Rotary International Club, Invited Speaker
- 2008 Arizona Senior Academy, Invited Speaker
- 2008 **Science for Monks Program**, Dharamsala, India, Lecturer
- 2008 Biosphere 2 Public Lecture Series
- 2008 Aspen Center for Physics Wednesday Night BBQ, Speaker
- 2008 Steward Observatory Public Evening Lecturer
- 2008 Women’s International League for Peace and Freedom, Speaker
- 2008 **Smithsonian Visiting Associates** Lecturer
- 2008 University of Arizona Kachina Galley, Hubble Exhibit, Opening Reception Speaker
- 2008 Tucson Club Congress “Astronomy Cocktail Hour,” co-Host
- 2008 Spirit of the Senses Salon, “The End,” Phoenix, Speaker
- 2008 University of Arizona H+ Club, Transhumanist Society, Speaker
- 2008 **The Learning Curve**, “Dharma and the Universe,” Series of 8 Public Lectures
- 2008 BBC World Service “Heart and Soul” on Radio 4, Interview

- 2008 **O'Reilly Web 2.0 Summit**, Internet Leaders Conference, San Francisco
- 2009 SETI Institute, Workshop to Develop an Astrobiology Roadmap of Societal Issues
- 2009 International Year of Astronomy, "365 Days of Astronomy" Podcast
- 2009 **Science for Monks Program**, Solan, India, Lecturer
- 2009 KUAZ "Arizona Illustrated" interview on Astrobiology
- 2009 Arizona Blue Chip Program "Fireside Chat" Speaker
- 2009 **Tucson Festival of Books**, Author/Speaker
- 2009 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Okanagan College, Vernon Campus, Canada)
- 2009 Vatican Observatory Summer School Conference, Rome, Italy, Lecturer/Organizer
- 2009 University of Texas Planetarium, Public Lecture, Arlington, Texas
- 2009 Categorically Not Salon, "Doing Darwin Differently," Santa Monica, California
- 2009 **Metanexus Institute**, "Cosmos, Nature, Culture," Tempe, Arizona, Keynote Speaker
- 2009 Campus Technology '09, Boston, Massachusetts
- 2009 College Endowment Association, Milwaukee, Wisconsin
- 2009 Students for the Exploration and Development of Space, National Meeting, Speaker
- 2009 **Darwin Anniversary Symposium**, St. Olaf College, Wisconsin, Invited Speaker
- 2009 Arizona Science Center, Phoenix, Year of Astronomy Invited Speaker
- 2009 The Learning Curve, Science Fridays Speaker
- 2010 **NASA/APPEL** "Essentials of Astronomy," Kennedy Space Center, Florida
- 2010 Vatican Observatory Seminar, Speaker
- 2010 Santa Rosa Junior College, Public Lecture, Santa Rosa, California
- 2010 **NASA/APPEL** "Essentials of Astronomy 2," Marshall Space Flight Center, Alabama
- 2010 **Tucson Festival of Books**, Author/Speaker
- 2010 **Tucson Festival of Books**, Science Pavilion Speaker
- 2010 **NASA/APPEL** "Essentials of Astronomy 3," Goddard Space Flight Center, Maryland
- 2010 Mitchell Public Lecture, Texas A&M University, Texas
- 2010 **Science for Monks Program**, Bir, India, Lecturer
- 2010 Spirit of the Senses Salon, "If Galileo Could See Us Now," Phoenix, Speaker
- 2010 **NASA/APPEL** "Essentials of Astronomy 4," Johnson Space Center, Texas
- 2010 Second Life Public Lecture, "How It Ends," Second Life
- 2010 Antigone Books, "How It Ends" Presentation
- 2010 **NASA/APPEL** "Essentials of Astronomy 5," Kennedy Space Center, Florida
- 2010 Hayden Planetarium, Public Evening Lecturer
- 2010 University of Arizona Honors Convocation, Speaker
- 2010 **EDUCAUSE Conference**, Workshop Presenter, Anaheim, California
- 2010 Royal Astronomical Society, London, England, Lecturer
- 2010 Royal Greenwich Observatory, Greenwich, England, Lecturer
- 2010 Dana Science Center, Science Museum, London, England, Lecturer
- 2010 **BBC Radio 5 World Forum**, Speaker
- 2010 **Robinson Lecture**, Armagh Observatory, Armagh, Northern Ireland
- 2010 Robinson Schools Lecture, Armagh, Northern Ireland
- 2010 Dark Matter Awareness Week, Speaker
- 2010 Tucson Rotary Club, Invited Speaker

- 2010 **NASA/APPEL** “Essentials of Astronomy 6,” Johnson Space Center, Texas
- 2011 **College of Science Public Lecture Series**, “Big Bang,” Speaker
- 2011 La Posada Community, Green Valley, Invited Speaker
- 2011 Arizona Senior Academy, Invited Speaker
- 2011 **NASA/APPEL** “Essentials of Astronomy 7,” Jet Propulsion Laboratory, California
- 2011 **College of Science Public Lecture Series**, “Astrobiology,” Speaker
- 2011 Space Fest III, Starr Pass Resort, Speaker
- 2011 Using Astronomy to Teach Physics, Boston AAS Meeting
- 2011 **NASA/APPEL** “Essentials of Astronomy 8,” Kennedy Space Center, Florida
- 2011 **NASA/APPEL** “Essentials of Astronomy 9,” Goddard Space Flight Center, Maryland
- 2011 National Academy of Sciences, “Art Science Evening Rendezvous,” Speaker/Panelist
- 2011 Cosmology and Consciousness Conference, Dharamsala, India, Keynote Speaker
- 2012 **NASA/APPEL** “Essentials of Astronomy 10,” Langley Research Center, Virginia
- 2012 Council on Science and Technology, Princeton University, Invited Lecture
- 2012 McGill University Astrobiology Lecture Series, Montreal, Canada
- 2012 “Cave” Invited Lecture, Kingston University, Ontario, Canada
- 2012 **The Art and Craft of Science Writing**, Princeton University, Organizer/Presenter
- 2012 “The Alpha and the Omega” panelist, the Helix Center, New York, New York
- 2012 **NASA/APPEL** “Essentials of Astronomy 11,” Goddard Space Flight Center, Maryland
- 2012 **College of Science “Galileo Circle”** Tour Lecturer and Organizer, Italy
- 2012 Steward Observatory Public Evening Lecturer
- 2012 NASA “Night Sky Network,” Invited Speaker
- 2012 Hubble Roadshow Panelist, Tucson, Arizona
- 2012 **NASA/APPEL** “Essentials of Astronomy 12,” Marshall Space Flight Center, Maryland
- 2012 Western Regional Noyce Conference, Keynote Speaker
- 2012 Ventana Canyon Resort, Tucson, “Cosmic Evolution,” Invited Speaker
- 2012 The Learning Curve, Food for Thought, “The God Particle,” Tucson, Arizona
- 2013 **Science for Monks Program**, Ganden Monastery, India, Lecturer
- 2013 Sonoran Speakers Club, Phoenix, Arizona
- 2013 Benjamin Dean Lecture, California Academy of Sciences, San Francisco, California
- 2013 **NASA/APPEL** “Essentials of Astronomy 13,” NASA Headquarters, Washington, DC
- 2013 Vatican Observatory Foundation Seminar, Panelist, San Francisco, California
- 2013 Tucson Amateur Astronomy Association, Speaker
- 2013 **Tucson Festival of Books**, “Heavens Above,” Lecturer
- 2013 **Tucson Festival of Books**, Author’s Table Participant
- 2013 **Tucson Festival of Books**, Science City, Science Café Presenter
- 2013 **Tucson Festival of Books**, Science and Science Fiction Panelist
- 2013 **TEDx Tucson**, “Science for Monks” Presentation
- 2013 American Astronomical Society **Harlow Shapley Visiting Lecturer** (Okanagan College, Vernon Campus, Canada)
- 2013 “First Sunday” Unitarian Gathering, Science and Buddhism, Tucson, Arizona
- 2013 Astronomical Society of the Pacific, “Cosmos in the Classroom,” Presenter
- 2013 **NASA/APPEL** “Essentials of Astronomy 14,” Kennedy Space Center, Florida
- 2013 **Scientific American** “Bright Horizons” Norwegian Cruise Lecturer

- 2013 **NASA/APPEL** “Essentials of Astronomy 15,” Marshall Space Flight Center, Maryland
- 2013 University of Arizona Biosphere 2 Lecturer
- 2013 Confluentcenter “Show and Tell at Playground” Series Presenter
- 2013 Spirit of the Senses Salon, “Monk Gravity,” Phoenix, Speaker
- 2013 Tucson Area Physics Teachers, Speaker
- 2013 “My Arizona” Lecture, College of Social and Behavioral Sciences
- 2014 Free Thought Arizona, Speaker, Tucson, Arizona
- 2014 Graduate Club, Guest Speaker, Mountain Oyster Club, Tucson, Arizona
- 2014 Webinar on “Science Literacy,” Center of the Integration of Research, Teaching, and Learning
- 2014 **Hayden Planetarium**, Frontiers Lecture Series, New York City
- 2014 **Tucson Festival of Books**, STEM Literacy Professional Development Presenter
- 2014 **Tucson Festival of Books**, Interview with Ben Bova
- 2014 **Tucson Festival of Books**, Science City, Astrobiology Presenter
- 2014 **Tucson Festival of Books**, Science and Science Fiction Panelist
- 2014 Sonoran Astronomical Society, Speaker, Green Valley, Arizona
- 2014 University of Arizona Museum of Art, Ethics of Space Exploration Panelist
- 2014 University of Arizona “Campaign Kickoff” Faculty Speaker
- 2014 “Starstruck” Pima County Libraries Fundraiser, Presentation
- 2014 Museum of the Southwest, Astrobiology Talk, Midland, Texas
- 2014 **Skeptics Lecture Series**, Speaker, California Institute of Technology, Pasadena
- 2014 Howard Hughes Medical Institute, Professors Competition Presenter, Chevy Chase
- 2014 Arizona Senior Academy, Invited Speaker, Tucson
- 2014 **Cosmos and Creation** Invited and Keynote Lecturer, Loyola University, Baltimore
- 2014 Sydney Observatory, Public Lecture, Sydney, Australia
- 2014 Astronomical Society of the Pacific, Annual Meeting, Science Literacy Panel, San Francisco
- 2014 **NASA/APPEL** “Essentials of Astronomy 16,” Marshall Space Flight Center, Maryland
- 2014 **NASA/APPEL** “Essentials of Astronomy 17,” Marshall Space Flight Center, Maryland
- 2104 Science for Monks, Soup Salon, Tucson, Arizona
- 2014 **Science for Monks Program**, Geshe Workshop, Dharamsala, India, Lecturer
- 2014 American Astronomical Society **Harlow Shapley Visiting Lecturer** (South Florida College, Sebring, Florida)
- 2014 University of South Florida Humanities Institute’s “Science and Society,” Invited Keynote Speaker, Tampa, Florida
- 2014 American College of Surgeons, Arizona Chapter, Banquet Speaker, Tucson
- 2014 **NSF/Mathematics and Physics Division Distinguished Lecture**, Washington, DC.
- 2014 “Immortality” panelist, the Helix Center, New York, New York
- 2015 Spirit of the Senses Salon, “The Future of Space Travel,” Phoenix, Speaker
- 2015 Antigone Books, “Humble Before the Void” Presentation
- 2015 Los Angeles City College Book Program, “Dreams of Other Worlds,” Speaker
- 2015 **College of Science Public Lecture Series**, “Intelligent Life Beyond Earth,” Speaker
- 2015 **Tucson Festival of Books**, “Hard Science Fiction Isn’t So Hard” Panelist
- 2015 **Tucson Festival of Books**, “A Human Perspective of the Universe” Panelist
- 2015 **Tucson Festival of Books**, Humble Before the Void, Presenter
- 2015 **Tucson Festival of Books**, “Real Science vs. Science Fiction” Panelist

2015 Arizona Senior Academy, Invited Speaker, Tucson
 2015 Sunrise Rotary Club, “Dreams of Other Worlds,” Presentation
 2015 **University of Arizona**, College of Science, Commencement Speaker
 2015 Dartmouth College, The Future of Space Travel, Invited Public Speaker
 2015 Flandrau Planetarium, “The Heritage of Astronomical Art in Arizona” Keynote Speaker
 2015 UA Strategic Planning Meeting, Space Systems, “A Big Idea,” Lecturer
 2015 University of Arizona, Eller Business School, Creativity Lecture
 2015 **NASA/APPEL** “Essentials of Astronomy 18,” Marshall Space Flight Center, Maryland
 2015 Blackwells Bookstore, Public Lecture, Oxford, England
 2015 Gresham College Public Lecture by Lord Martin Rees, Discussion Panel Chair
 2015 Books for Breakfast Event, Shoreditch House, London, England
 2015 Lunch Talk, AKQA Digital Agency, London, England
 2015 **Science for Monks Program**, Geshe Workshop, Bylekuppe, India, Lecturer
 2015 Cosmology for Monks, Public Lecture, Sera Jey Monastery, Karnataka, India
 2015 Kartchner Caverns Discovery Center, Kartchner Caverns State Park, Public Talk
 2015 Tucson Magnet High School, Art and Science Day, Invited Speaker
 2015 Lutheran Campus Ministry Fall Banquet, Guest Speaker
 2015 Seattle Museum of Flight, Delta V SpaceFest, Public Lecture, Seattle, Washington
 2015 **SpaceCom National Conference and Exposition**, Houston, Keynote Speaker
 2015 Daily Planet, Discovery Channel, Interview, Houston, Texas
 2015 “Science and Buddhism” Guest Lecture, University of Wisconsin, Eau Claire
 2015 This Week in Startups, Space Travel Interview, San Francisco, California
 2016 Southwestern STEM Conference, Presentation, Phoenix, Arizona
 2016 Vatican Observatory Foundation, Annual Meeting, Invited Talk, Phoenix, Arizona
 2016 Invited Chautauqua Lecture, Eastern Kentucky University
 2016 Gravitational Waves Discussion, University of the West Indies, Port of Spain, Trinidad
 2016 La Posada, “The Forum,” Invited Speaker, Green Valley, Arizona
 2016 **Tucson Festival of Books**, “Imagineering Mars” Panelist
 2016 **Tucson Festival of Books**, “Life Beyond Earth and Space Exploration” Panelist
 2016 **Tucson Festival of Books**, “Scientists Who Write Science Fiction” Panelist
 2016 **Tucson Festival of Books**, “The Science of Shakespeare” Panelist
 2016 **College of Science “Galileo Circle”** Tour Lecturer and Organizer, Chile
 2016 Gresham College, Invited Public Lecture, London, England
 2016 Invited Public Science Lecture, St. Peters School, York, England
 2016 Space Drafts Public Talk, Borderlands Brewing Company, Tucson
 2016 **Vatican Observatory** 14th Summer School in Astronomy and Astrophysics, Lecturer

Plus numerous talks at local area elementary, middle and high schools; and at Amateur Astronomy clubs in Arizona, California, New Mexico, Texas, Florida, Alabama, Maryland, Washington, and in British Columbia, Canada, and New South Wales, Australia.

14 Invited Research Presentations

- 1986 Continuum Emission in Active Galactic Nuclei, Kitt Peak National Observatory
1987 Superluminal Radio Sources, California Institute of Technology
1987 New Directions in Active Galactic Nuclei, ITP, Santa Barbara
1989 BL Lac Objects: 10 Years After, Como, Italy
1990 Summer Workshop on Stellar Dynamics and Galaxy Formation, Aspen Center for Physics
1992 Variability of Blazars, Turku, Finland
1993 Sky Surveys: Protostars to Protogalaxies, Caltech, Pasadena
1994 The Nature of Compact Objects in Active Galactic Nuclei, 35th Herstmonceux Conference, Cambridge, England
1994 Frontiers of Space and Ground-based Astronomy, Noordwijk, Holland
1994 European and National Astronomy Meeting, Edinburgh, Scotland
1994 The Inspiration of Astronomical Phenomena, Specola Vaticana, Italy
1994 Summer Workshop on Clusters of Galaxies, Aspen Center for Physics
1994 ESO Workshop on Quasar Absorption Lines, Munich, Germany
1995 Astronomical Luminosity Functions, California Institute of Technology
1995 Royal Society/Royal Astronomical Society Conference on Low Luminosity Galaxies, Cardiff, Wales
1995 IAU Symposium 175 on Extragalactic Radio Sources, Bologna, Italy
1996 The Morphology, Dust Content, and Gas-Dust Ratios in Galaxies Meeting, Witwatersrand, South Africa
1996 HST and the High Redshift Universe, 37th Herstmonceux Conference, Cambridge, England
1997 Conference on "Inspiration of Astronomical Phenomena" Invited Speaker
1997 Structure and Evolution of the Intergalactic Medium from QSO Absorption Line Systems, Paris, France
1997 The Young Universe, Monte Porzio, Italy
1997 Winter Workshop on Observational Tests of Cosmological Models, Aspen Center for Physics
1998 IAU Colloquium 171 on The Low Surface Brightness Universe, Cardiff, Wales, U.K.
1999 The Inspiration of Astronomical Phenomena II, Malta
2000 Disk Galaxies and Galaxy Disks, Rome, Italy
2001 Quasar Host Galaxies and Environments, Granada, Spain
2001 Intergalactic Gas at Low Redshift, Carnegie Observatories, Pasadena
2001 The Inspiration of Astronomical Phenomena III, Sicily, Italy
2002 Gravitational Lensing, Ringberg Castle, Germany
2002 The Intergalactic Medium at Low Redshift, Boulder, Colorado
2002 Measuring the Universe, Carnegie Centennial Symposium, Pasadena
2003 Guillermo Haro Workshop on AGN Surveys, INAOE, Puebla, Mexico
2003 The Inspiration of Astronomical Phenomena IV, Oxford, England
2004 Conference on "Inspiration of Astronomical Phenomena IV" in Oxford Invited Speaker
2004 HST Legacy Project, COSMOS Team Meeting, New York
2005 QSO Host Galaxies: Environments and Evolution, Groningen University, Netherlands
2005 Observing Dark Energy, ASP Conference, Tucson, Arizona
2005 HST Legacy Project, COSMOS Team Meeting, Kyoto, Japan
2005 Western Humanities Conference, Plenary Speaker, Tucson
2005 Conference on "Inspiration of Astronomical Phenomena V," Chicago, Invited Speaker

2006 Sources and Detection of Dark Matter and Dark Energy in the Universe, UCLA, California
2006 IAU Symposium 238 on Black Holes From Stars to Galaxies, Prague, Czechoslovakia
2006 International Meeting on Gravitation and Cosmology, Santa Clara, Cuba
2006 IAU General Assembly XXXVI, Prague, Czechoslovakia
2006 Star Formation Near and Far, Edinburgh, Scotland
2006 The Inspiration of Astronomical Phenomena V, Chicago, Illinois
2007 Physics and Astrophysics of Supermassive Black Holes, Santa Fe, New Mexico
2007 IAU Symposium 244 on Dark Baryons and Dim Galaxies, Cardiff, Wales
2008 The Interplay Between SMBH, Star Formation & Galaxy Evolution, Aspen Center for Physics
2008 KICP Workshop "Viewing the Universe via the World Wide Web," Chicago, Illinois
2008 Cosmology Across Cultures, Granada, Spain
2009 Astronomy and its Instruments Before and After Galileo, Venice, Italy
2009 Harvesting the Desert: The Universe Between Redshifts 1 and 3, Marseille, France
2009 American Association for the Advancement of Science, "Weird Life," San Francisco
2009 The Inspiration of Astronomical Phenomena VI, Venice, Italy
2009 400th Anniversary of Galileo Celebration, Papal Audience, Rome, Italy
2009 Pontifical Academy Study Week on Astrobiology, Rome, Italy
2010 Formation and Evolution of Black Holes, Aspen Center for Physics
2010 Astrobiology Science Conference (AbSciCon2010), League City, Texas
2010 Aspen Center for Physics, Aspen, Colorado
2010 SETI at 50 Workshop, NRAO, Charlottesville, Virginia
2010 Tracing the Ancestry of Galaxies, IAU Symposium 277, Burkina Faso, Africa
2010 Conference on "Inspiration of Astronomical Phenomena VII," Bath, Invited Speaker
2011 Aspen Center for Physics, Aspen, Colorado
2011 International Conference on Science in Society, Keynote Speaker, Washington, DC
2011 History and Philosophy of Astrobiology, Ven, Sweden
2011 Cosmos and Consciousness I, Invited Speaker, Dharamsala, India
2012 Astrobiology Science Conference (AbSciCon2012), Atlanta, Georgia
2012 NASA Virtual Workshop on the Study of Intelligence in Astrobiology, Tempe, Arizona
2012 Origins of the Expanding Universe, Vesto Slipher Centennial, Flagstaff, Arizona
2012 The Science and Religion Dialog: Past, Present, and Future, Heidelberg, Germany
2012 NASA Astrobiology and Society Focus Group, Participant and Speaker
2012 International Science in Society Conference, Berkeley, California
2013 Conference on "Inspiration of Astronomical Phenomena VIII," New York, Invited Speaker
2013 Celebrity Infinity "Scientific American" Cruise, Invited Speaker
2013 Aspen Center for Physics, Aspen, Colorado
2013 Astrobio 2013 Workshop, Santiago, Chile, Plenary Speaker
2013 Physics Department Colloquium, University of Arizona
2013 Cosmos and Consciousness II, Invited Speaker, Dehradun, India
2013 International Science in Society Conference, Warsaw, Poland
2014 HHMI Professors Competition, Finalist and Presenter, Chevy Chase
2014 Cosmos and Creation, Keynote Speaker, Loyola University, Baltimore, Maryland
2014 Anglo-Australian Observatory Distinguished Visitor Lecture, Epping, Australia

2014 San Marino Symposium on “The Roots of Motivation for Science and Knowledge,” Invited Speaker, San Marino, Italy
 2014 Rimini Meeting, “To the Ends of the Earth and Existence,” Public Presentation, Rimini, Italy
 2014 National Science Foundation, MPS Distinguished Lecturer, Washington, DC
 2015 AAAS Annual Meeting Special Astrobiology Session, “Our Future Off-Earth” Speaker
 2015 American Physical Society, “Searching for Life in the Universe,” Invited Speaker
 2015 Aspen Center for Physics, Aspen, Colorado
 2015 Howard Hughes Medical Institute, Professors Meeting, Education Research Speaker
 2015 Conference on "Inspiration of Astronomical Phenomena IX," London, Invited Speaker
 2015 Cosmos and Consciousness IV, Organizer and Invited Speaker, Bykeluppe, India
 2015 San Francisco State University, California, “Growing the Research Enterprise”
 2015 American Geophysical Union, Annual Meeting, San Francisco, Invited Presentation

Plus more than 180 research colloquia at astronomy and physics departments and observatories in the United States (California Institute of Technology, Space Telescope Science Institute, Kitt Peak National Observatory, Cerro Tololo Interamerican Observatory, Carnegie Observatories, Dominion Astrophysical Observatory, Smithsonian Astrophysical Observatory, Los Alamos National Lab, Lawrence Livermore National Lab, The UK Joint Astronomy Center, Keck Observatory, AMNH, and the Universities of Virginia, Ohio State, Washington, Columbia, NYU, New Mexico, New Mexico State, Princeton, UCLA, UCSB, UCSD, UC Berkeley, UC Santa Cruz, UC Irvine, Colorado, Texas-Austin, Texas-Arlington, South Florida, and in Canada (Okanagan University, University of British Columbia, Kingston University, McGill University), United Kingdom (Royal Observatory Edinburgh, Royal Greenwich Observatory, Armagh Observatory, and the Universities of Durham, Sussex, Edinburgh, Cambridge, and Cardiff), and Australia (the Anglo-Australian Observatory and Mount Stromlo Observatory), and South Africa (University of the North West and South African Astronomical Observatory).

15 Books Authored

- Hartmann, W.H., and Impey, C.D. 1994. **Astronomy: The Cosmic Journey**, 5th Edition (Wadsworth Publishing, ISBN 0-534-21192-5), 728 pages
- Impey, C.D., and Hartmann, W.H. 2000. **The Universe Revealed**, 1st Edition (Brooks Cole Publishing, ISBN 0-534-24894-2), 636 pages
- Impey, C.D. 2007. **The Living Cosmos: Our Search for Life in the Universe**, 1st Edition (Random House, ISBN 978-1-4000-6506-6), 432 pages
- Impey, C.D. 2010. **How It Ends: From You to the Universe**, 1st Edition (Norton, ISBN 978-0-393-06985-3), 352 pages

- Impey, C.D. 2011. **The Living Cosmos: Our Search for Life in the Universe**, Paperback Edition (Cambridge University Press, ISBN 978-0-521-17384-1), 393 pages
- Impey, C.D. 2012. **How It Began: A Time Travelers Guide to the Universe**, 1st Edition (Norton, ISBN 978-0-393-08002-5), 448 pages
- Impey, C.D., and Henry, H. 2013. **Dreams of Other Worlds: The Amazing Story of Unmanned Space Exploration**, 1st Edition (Princeton University Press, ISBN 978-0-691-14753-6), 450 pages
- Impey, C.D. 2013. **Shadow World**, 1st Edition (Dark Skies Press, ISBN 978-0-989-81761-5), 328 pages
- Impey, C.D. 2014. **Humble Before the Void**, 1st Edition (Templeton Press, ISBN 978-1-59947-392-5), 246 pages
- Impey, C.D. 2015. **Beyond: Our Future in Space**, 1st Edition (Norton, ISBN 978-0-393-23930-0), 321 pages
- Impey, C.D. 2018. **Seeds of the Universe: The Life and Times of Massive Black Holes**, 1st Edition (Norton), in press

16 Books Edited

- Davies, J.I, Impey, C.D., and Phillipps, S. 1999. **The Low Surface Brightness Universe: IAU Colloquium 171**, (Astronomical Society of the Pacific, ISBN 1-886733-92-9), 400 pages
- Impey, C.D. 1999. **International Symposium on Astrophysics Research and Science Education**, (University of Notre Dame Press, ISBN 0-268-03155-X), 324 pages
- Impey, C.D., and Petry, C.E. 2003. **Science and Theology: Ruminations on the Cosmos**, (University of Notre Dame Press, ISBN 88-209-6888-6), 165 pages
- Impey, C.D., and Petry, C.E. 2003, **International Symposium on Astrophysics Research and on the Dialogue Between Science and Religion**, (University of Notre Dame Press, ISBN 88-209-6890-8), 322 pages
- Impey, C.D. 2010. **Talking About Life: Conversations on Astrobiology**, (University of Cambridge Press, ISBN 978-0-521-51492-7), 408 pages

- Impey, C.D., Lunine, J., and Funes, J., S.J. 2012. **Frontiers of Astrobiology**, (University of Cambridge Press, ISBN 978-1-107-00641-6), 250 pages
- Impey, C.D., Stoeger, W., and Spitz, A. 2013. **Encountering Life in the Universe: Ethical Foundations and Social Implications of Astrobiology**, (University of Arizona Press, ISBN 978-0-8165-2870-7), 265 pages
- Impey, C.D. 2017. **The Art and Craft of Science Writing**, (Princeton University Press, in preparation)
- Campion, N., and Impey, C.D. 2017. **The Inspiration of Astronomical Phenomena. IX**, (Sophia Center Press), in press

17 Educational Publications

- [1] Impey, C.D. 1994. **Great Ideas for Teaching Astronomy** (West Publishing), 29 sections included (three subsequent editions)
- [2] Cocke, W.J., Impey, C.D., and Dunlap, J.L. 1994. **A Content-Based Master's Program for Science Teachers**, *The Physics Teacher*, p. 502 (*refereed*)
- [3] Impey, C.D. 1995. **The Search for Life in the Universe: A Humanistic Perspective**, *Vistas in Astronomy*, Vol. 39, p. 553 (*refereed*)
- [4] Impey, C.D. 1996. **Ghost Galaxies in the Cosmos**, *Astronomy Magazine*, November, p. 40
- [5] Impey, C.D. 1998. **Life in the Universe**, *The University Book: An Anthology of Writings from the University of Arizona*, (Simon and Schuster Custom Publishing), p. 283
- [6] Impey, C.D. 1998. **The Unspeakable Act of Creation**, *Mercury Magazine*, Vol. 27, March/April, p. 9
- [7] Impey, C.D. 1999. **Our Quest to the Cosmos**, *The World and I Magazine*, September, p. 160
- [8] Impey, C.D. 2000. **Interactive Teaching Tools for Astronomy**, *Interactive Learning: Vignettes from America's Most Wired Campuses*, (Anker Publishing: Bolton, MA), p. 56
- [9] Impey, C.D. 2000. **The End of Astronomy?**, *Mercury Magazine*, Vol. 29, May/June, p. 34

- [10] Impey, C.D. 2001. **The Size and Shape of the Universe**, in *Proceedings of the Second Conference on the Inspiration of Astronomical Phenomena*, in press
- [11] Impey, C.D. 2001. **Reacting to the Size and Shape of the Universe**, *Mercury Magazine*, Vol. 30, January/February, p. 36
- [12] Impey, C.D. 2001. **Reacting to the Size and Shape of the Universe, Part 2**, *Mercury Magazine*, Vol. 30, March/April, p. 34
- [13] Impey, C.D. 2003, **Truth and Beauty in Cosmology**, in *International Symposium on Astrophysics Research and on the Dialogue Between Science and Religion*, (University of Notre Dame Press), p. 40
- [14] Impey, C.D. 2003. **Does the Universe Have an Aesthetic?**, *Memorie della Societa Astronomica Italiana*, Vol. 73, p. 266 (*refereed*)
- [15] Impey, C.D. 2003. **Truth and Beauty in Cosmology**, *Mercury Magazine*, Vol. 33, p. 20
- [16] Impey, C.D. 2006. **Borders in Astronomy**, *Western Humanities Review*, Volume 60, Issue 2, p. 175 (*refereed*)
- [17] Impey, C.D. 2008. **Exohumanities**, *Western Humanities Review*, Volume LXII, Number 3, p. 98 (*refereed*)
- [18] Impey, C.D. 2008. **How Life Could Thrive on Hostile Worlds**, *Astronomy Magazine*, Volume 36, Number 12, p. 54
- [19] Gauthier, A., and Impey, C.D. 2008. **ASTR202, Exploring Life in the Universe**, *Educause Review*, Volume 43, Number 5, September/October
- [20] Impey, C.D. 2009. **The New Habitable Zones**, *Sky and Telescope Magazine*, Volume 118, Number 4, p. 20 (cover story)
- [21] Impey, C.D., and Green, H.L. 2010. **The Living Cosmos: A Fabric That Binds Art and Science**, *Leonardo Magazine*, Vol. 43, No. 5, p. 435 (*refereed*)
- [22] Impey, C.D. 2010. **Letter to Galileo – How Astronomy Has Changed over the Past 400 Years**, *Astronomy Magazine*, Volume 38, Number 9, p 44
- [23] Impey, C.D. 2010. **Science Education in the Age of Science**, in *Science and the Educated American: A Core Component of Liberal Education*, eds. J. Meinwald and J. Hildebrand, American Academy of Arts and Sciences, Cambridge, Mass., p. 70

- [24] Impey, C.D. 2011. **Greatest Mysteries in Astronomy**, *Sky and Telescope Magazine*, Special Issue, 4 sections contributed
- [25] Impey, C.D. 2011. **Galileo: A Reverie**, in *The Inspiration of Astronomical Phenomena VI*, ed. E.M. Corsini, Astronomical Society of the Pacific, San Francisco, California, p. 435
- [26] Impey, C.D., Buxner, S., Antonellis, J., Johnson, E., and King, C. 2011. **A Twenty Year Survey of Science Literacy Among College Undergraduates**, *Journal of College Science Teaching*, Vol. 40, No. 4, p. 70 (*refereed*)
- [27] Buxner, S.R, Antonellis, J., and Impey, C.D. 2011. **A 20-Year Study of Undergraduate Astronomy Students' Beliefs and Knowledge in Science and Technology**, in *Earth and Space Science: Making Connections in Education and Public Outreach*, Astronomical Society of the Pacific, p. 434
- [28] Brissenden, G., Prather, E., Impey, C.D. and Lee, K. 2011. **The Center for Astronomy Education (CAE) and Our NSF CCLI Phase-III Collaboration of Astronomy Teaching Scholars (CATS) Program: Our Community-Based Model for Astronomy Education Research**, in *Earth and Space Science: Making Connections in Education and Public Outreach*, Astronomical Society of the Pacific, p. 431
- [29] Sugarman, H, Impey, C.D., Buxner, S., and Antonellis, J. 2011. **Astrology Beliefs Among Undergraduate Students**, *Astronomy Education Review*, Vol. 10, Issue 1., p. 1 (*refereed*)
- [30] Offerdahl, E. and Impey, C.D. 2011. **Assessing General Education Science Courses: a Portfolio Approach**, *Journal of College Science Teaching*, Vol. 41, No. 5, p. 19 (*refereed*)
- [31] Antonellis, J., Buxner, S., Impey, C.D., and Sugarman, H. 2012. **Surveying Science Literacy Among Undergraduates: Insights from Open-Ended Responses**, *Journal of College Science Teaching*, Vol. 41, No. 3, p. 82 (*refereed*)
- [32] Impey, C.D. 2012. **Astronomy in the United States: Workforce Development and Public Engagement**, in *Organizations, People and Strategies in Astronomy, Volume 1*, edited by A. Heck, Duttlenheim: Vennggeist, p. 77 (*refereed*)
- [33] Brissenden, G., Prather, E.E., and Impey, C.D. 2012. **Astronomy Collaboration of Astronomy Teaching Scholars**, in *Organizations, People and Strategies in Astronomy, Volume 1*, edited by A. Heck, Duttlenheim: Vennggeist, p. 149 (*refereed*)

- [34] Impey, C.D., Buxner, S., and Antonellis, J. 2012. **Nonscientific Beliefs Among Undergraduate Students**, *Astronomy Education Review*, 11(1), 010111 (*refereed*)
- [35] Eisenstein, D., et al. (17 authors, including C.D. Impey) 2012. **Advancing Astronomy in the Coming Decade: Challenges and Opportunities**. Report of the National Science Foundation Division of Astronomical Sciences Portfolio Review Committee, unpublished report, 170 pages
- [36] Buxner, S, Impey, C.D., Tijerino, K., et al. 2012. **Investigating Where Students Get Their Information About Science**, *Mercury*, 24(4), p. 24
- [37] Impey, C.D. 2012. **The End: Astronomy Meets Eschatology**, in *Engaging the Heavens: Inspiration of Astronomical Phenomena V*, eds. M. Bolt and S. Case, Astronomical Society of the Pacific, San Francisco, California, p. 143 (*refereed*)
- [38] Impey, C.D. 2013. **Science Literacy of Undergraduates in the United States**, in *Organizations, People and Strategies in Astronomy, Volume 2*, edited by A. Heck, Duttlenheim: Venngest, p. 353 (*refereed*)
- [39] Impey, C.D. 2013. **What Students Know About Science**, *International Journal of Science and Society*, in press (*refereed*)
- [40] Impey, C.D. 2013, **Galaxy Redshifts: From Dozens to Millions**, in *Origins of the Expanding Universe: 1912-1932, ASP Conference Series*, edited by D. Hunter and M. Wray, p. 289 (*refereed*)
- [41] Hardegree-Ullman, K.K., Impey, C.D., Patikkal, A., and Austin, C.L. 2013, **Using the Teach Astronomy Site to Enrich Introductory Astronomy Classes**, in *Communicating Science: a National Conference on Science Education and Public Outreach, ASP Conference Series Vol. 473*, edited by J. Barnes, C. Shupla, J, Manning, and M. Gibbs, p. 43
- [42] Prather, E.E., Wallace, C.S., Teske, J., Impey, C.D., and Buxner, S. 2013, **Uncovering What Our Students Really Think About Science and Society – Are We Doomed?**, in *Communicating Science: a National Conference on Science Education and Public Outreach, ASP Conference Series Vol. 473*, edited by J. Barnes, C. Shupla, J, Manning, and M. Gibbs, p. 97
- [43] Impey, C.D., Buxner, S., Antonellis, J., et al. 2013, **An Ongoing Investigation of Science Literacy: Results of a 22-Year Study Probing Students' Knowledge and Attitudes Toward Science**, in *Communicating Science: a National Conference on Science Education and Public Outreach, ASP Conference Series Vol. 473*, edited by J. Barnes, C. Shupla, J, Manning, and M. Gibbs, p. 189

- [44] Tijerino, K., Buxner, S., Impey, C.D., et al. 2013, **Investigating What Undergraduates Know About Science: Results from Complementary Strategies to Code Open-Ended Responses**, in *Communicating Science: a National Conference on Science Education and Public Outreach*, *ASP Conference Series Vol. 473*, edited by J. Barnes, C. Shupla, J. Manning, and M. Gibbs, p. 301
- [45] Buxner, S., Impey, C.D., Tijerino, K., et al. 2013, **Investigating Where Students Get Their Information About Science**, in *Communicating Science: a National Conference on Science Education and Public Outreach*, *ASP Conference Series Vol. 473*, edited by J. Barnes, C. Shupla, J. Manning, and M. Gibbs, p. 305
- [46] Impey, C.D., Hardegree-Ullman, K.K., Patikkal, A., Srinithan, A., Austin, C.L., Ganesan, N.K., and Guvenen, B.C. 2013, **A New Online Astronomy Resource for Education and Outreach**, *Astronomy Education Review*, 03011 (*refereed*)
- [47] Impey, C.D. 2013, **The First Thousand Exoplanets: Two Decades of Excitement and Surprise**, in *Astrobiology, History, and Society: Life Beyond Earth and the Impact of Discovery*, edited by D.A. Vakoch, Berlin: Springer, p. 201 (*refereed*)
- [48] Stoeger, W., Impey, C.D., and Spitz, A. 2013. **Astrobiology, Ethics, and Philosophy**, in *Encountering Life in the Universe: Ethical Foundations and Social Implications of Astrobiology*, eds. C. Impey, A. Spitz, and W. Stoeger, University of Arizona Press, Tucson, Arizona, p. 1
- [49] Impey, C.D. 2013. **Are We Alone? The Search for Life in the Universe**, in *Cosmology and Consciousness: Mind and Matter*, eds. G. Lhakdor and B. Johnson. Library of Tibetan Works and Archives, p. 1
- [50] Impey, C.D. 2014. **How Does the Universe End?** *Significance Magazine*, December Issue, p. 73
- [51] Buxner, S., Impey, C.D., and Johnson, B. 2015. **Weighing the Balance of Science Literacy in Education and Public Policy**, in *Celebrating Science: Putting Education Best Practices to Work*, *ASP Conference Series Vol. 500*, eds. G. Schultz, S. Buxner, L. Shore, and J. Barnes, p. 17
- [52] Impey, C.D., and Buxner, S. 2015. **Studying Students' Science Literacy: Non-Scientific Beliefs and Science Literacy Measures**, in *Celebrating Science: Putting Education Best Practices to Work*, *ASP Conference Series Vol. 500*, eds. G. Schultz, S. Buxner, L. Shore, and J. Barnes, p. 167
- [53] Impey, C.D., Buxner, S., Nieberding, M., and Romine, J. 2015. **Investigating Undergraduate Students' Science Literacy: Responses Related to Radiation and**

DNA, in *Celebrating Science: Putting Education Best Practices to Work*, ASP Conference Series Vol. 500, eds. G. Schultz, S. Buxner, L. Shore, and J. Barnes, p. 199

- [54] Buxner, S., Romine, J., Impey, C.D., Nieberding, M. 2015. **Investigating the Relationship Between Students' Science Knowledge and Their Reported Sources of Information**, in *Celebrating Science: Putting Education Best Practices to Work*, ASP Conference Series Vol. 500, eds. G. Schultz, S. Buxner, L. Shore, and J. Barnes, p. 207
- [55] Impey, C.D., Wenger, M.C., and Austin, C.L. 2015. **Astronomy for Astronomical Numbers: A Worldwide Massive Open Online Class**, *The International Review of Research in Open and Distributed Learning*, Vol. 16, No. 1, article published in the online journal at <http://www.irrod.org/index.php/irrod/article/view/1983/3204> (*refereed*)
- [56] Impey, C.D., and Jasensky, D. 2015. **When Art and Astronomy Meet**, *The Intellectual: Art, Science, and Architecture*, Issue 2, <http://the-intellectual-magazine.com/>
- [57] Impey, C.D. 2015. **How We Know What We Know**, in *Cosmology and Consciousness II. Knowing and Action*, Library of Tibetan Works and Archives, p. 9.

18 Astronomy Refereed Publications

- [1] Wolstencroft, R., Impey, C.D. and Smith, R. 1981. **Measurement of Linear and Circular Polarization with the UK Schmidt Telescope**. *M.N.R.A.S.*, **194**, 275
- [2] Impey, C.D., Brand, P.W.J.L. and Tapia, S. 1981. **A Polarization Burst in the BL Lac Object AO 0235+164**. *M.N.R.A.S.*, **198**, 1
- [3] Impey, C.D. and Brand, P.W.J.L. 1981. **Infrared Photometry of Flat Spectrum Radio Sources**. *Nature*, **292**, 814
- [4] Impey, C.D. and Brand, P.W.J.L. 1981. **The Calibration of a Radio-Independent Search for BL Lac Objects**. *M.N.R.A.S.*, **201**, 849
- [5] Impey, C.D., Wolstencroft, R.D., Brand, P.W.J.L. and Williams, P.M. 1982. **Infrared Polarimetry and Photometry of BL Lac Objects**. *M.N.R.A.S.*, **200**, 19
- [6] Glassgold, A.E. *et al.* (including Impey, C.D.) 1983. **Multifrequency Observations of the Flaring Quasar 1156+295**. *Ap.J.*, **274**, 101
- [7] Impey, C.D. 1983. **Multiaperture Infrared Photometry of Extragalactic Radio Sources**. *M.N.R.A.S.*, **202**, 397

- [8] Impey, C.D., Brand, P.W.J.L., Wolstencroft, R.D. and Williams, P.M. 1984. **Infrared Polarimetry and Photometry of BL Lac Objects, II.** *M.N.R.A.S.*, **209**, 245
- [9] Holmes, P.W., Impey, C.D., Brand, P.W.J.L. and Williams, P.M. 1984. **Infrared Polarimetry and Photometry of BL Lac Objects, III.** *M.N.R.A.S.*, **210**, 961
- [10] Holmes, P.M. *et al.* (including Impey, C.D.) 1984. **A Polarization Flare in the BL Lac Object OJ 287.** *M.N.R.A.S.*, **211**, 497
- [11] Bregman, J.D. *et al.* (including Impey, C.D.) 1986. **Multifrequency Observations of the Superluminal Quasar 3C 345.** *Ap.J.*, **301**, 708
- [12] Landau, R. *et al.* (including Impey, C.D.) 1986 **Active Extragalactic Sources: Nearly Simultaneous Observations from 20cm to 1400A.** *Ap.J.*, **308**, 78
- [13] Roellig, T.P., Becklin, E.E., Impey, C.D. and Werner, M.W. 1986. **Simultaneous Multifrequency Infrared Observations of Flat Spectrum Radio Sources,** *Ap.J.*, **304**, 646
- [14] Impey, C.D. and He, X.T. 1986. **Quasars in the Region of the Virgo Cluster,** *M.N.R.A.S.*, **221**, 897
- [15] He, X.T. and Impey, C.D. 1986. **Emission Line Galaxies in the Virgo Cluster Region,** *M.N.R.A.S.*, **221**, 727
- [16] Impey, C.D., Wynn-Williams, C.G. and Becklin, E.E. 1986. **Infrared Studies of Elliptical Galaxies. I. An Optically Selected Sample,** *Ap.J.*, **309**, 572
- [17] Halpern, J.P., Impey, C.D., Bothun, G., Tapia, S., Wilson, A. and Skillman, E. 1986. **IE 1415.6+2557 : An X-ray Selected BL Lac Object in a Luminous Galaxy,** *Ap.J.*, **302**, 711
- [18] Bothun, G.D., Impey, C.D., Malin, D.F. and Mould, J. 1987. **Discovery of a Huge Low-Surface-Brightness Galaxy: a Proto-Disk Galaxy at Low Redshift?,** *A.J.*, **94**, 23
- [19] Krisciunas, K., Sinton, W., Tholen, D., Tokunaga, A., Golish, W., Griep, D., Kaminski, C., Impey, C. and Christian, C. 1987. **Atmospheric Extinction and Night Sky Brightness at Mauna Kea,** *P.A.S.P.*, **99**, 887
- [20] Impey, C.D. and Neugebauer, G. 1988. **Energy Distributions of Blazars,** *A.J.*, **95**, 307
- [21] Impey, C.D., Bothun, G.D. and Malin, D.F. 1988. **Virgo Dwarfs: New Light on Faint Galaxies,** *Ap.J.*, **330**, 634

- [22] Impey, C.D. and Tapia, S. 1988. **New Blazars Discovered by Polarimetry**, *Ap.J.*, **333**, 666
- [23] Bregman, J.N. *et al.* (including Impey, C.D.) 1988. **Multifrequency Observation of the Optically Violent Variable Quasar 3C 446**, *Ap.J.*, **331**, 746
- [24] Impey, C.D. and Bothun, G.D. 1989. **Malin 1 : A Quiescent Disk Galaxy**, *Ap.J.*, **341**, 89
- [25] Bothun, G.D., Halpern, J.J., Lonsdale, C.J., Impey, C.D., and Schmitz, M. 1989. **The Wasilewski Sample of Emission Line Galaxies: Followup CCD Imaging, Spectroscopic and IRAS Observations**, *Ap.J.Suppl.*, **70**, 271
- [26] Impey, C.D., Malkan, M.A. and Tapia, S. 1989. **The Mini-Blazar in 3C 273**, *Ap.J.*, **347**, 145
- [27] Impey, C.D., Bothun, G.D., Malin, D. and Staveley-Smith, L. 1990. **An Optical Counterpart to the HI Cloud in the Local Supercluster**, *Ap.J.Lett.*, **351**, L33
- [28] Impey, C.D. and Tapia, S. 1990. **The Optical Polarization Properties of Quasars**, *Ap.J.*, **354**, 124
- [29] Impey, C.D., Wynn-Williams, *e.G.* and Becklin, E.E. 1990. **Infrared Studies of Elliptical Galaxies. II. A Radio Selected Sample**, *Ap.J.*, **356**, 62
- [30] Bothun, G.D., Schombert, J.M., Impey, C.D., and Schneider, S.E. 1990. **The Discovery of Another Giant, HI Rich, Low Surface Brightness Galaxy**, *Ap.J.*, **360**, 427
- [31] Schombert, J.M., Bothun, G.D., Impey, C.D., and Mundy, L.G. 1990. **CO Deficiency in LSB Galaxies: Clues to their Star Formation History**, *A.J.*, **100**, 1523
- [32] Impey, C.D., Lawrence, C.R. and Tapia, S. 1991. **Optical Polarization of a Complete Sample of Radio Sources**, *Ap.J.*, **375**, 46
- [33] Bothun, G.D., Impey, C.D. and Malin, D.F. 1991. **Extremely Low Surface Brightness Galaxies in the Fornax Cluster: Properties, Stability, and Luminosity Fluctuations**, *Ap.J.*, **376**, 404
- [34] Visnovsky, K., Impey, C.D., Foltz, C.B., Hewett, P.C., Weymann, R.J., and Morris, S. 1992. **The Radio Properties of Optically Selected Quasars**, *Ap.J.*, **391**, 560

- [35] Impey, C.D. and Gregorini, L. 1993. **Energy Distributions of Radio Galaxies**, *A.J.*, **105**, 853
- [36] Francis, P.J., Hooper, E.J. and Impey, C.D. 1993. **The Ultra-Violet Spectra of Radio-Loud and Radio-Quiet Quasars**, *A.J.*, **106**, 417
- [37] Bothun, G.D., Schombert, J.M., Impey, C.D., Sprayberry, D., and McGaugh, S.S. 1993. **The Small Scale Environment of Low Surface Brightness Disk Galaxies**, *A.J.*, **106**, 530
- [38] Webb, W., Malkan, M.A., Schmidt, G.D., and Impey, C.D. 1993. **The Wavelength Dependence of Polarization of Quasars and Active Galaxies**, *Ap.J.*, **419**, 494
- [39] Sprayberry, D., Impey, C.D., Irwin, M.J., McMahon, R., and Bothun, G.D. 1993. **The Discovery of a Third Giant Low Surface Brightness Disk Galaxy**, *Ap.J.*, **417**, 114
- [40] Dolan, J., Boyd, P., Wolinski, K., Smith, P., Impey, C.D., Bless, R., Nelson, M., Percival, J., Taylor, M., Elliot, J., Robinson, E., and van Citters, G.W. 1994. **The Linear Polarization of 3C 345 in the Ultraviolet**, *Ap.J.*, **432**, 560
- [41] Pickering, T.E., Impey, C.D. and Foltz, C.B. 1994. **ROSAT Observations of $z > 3$ QSOs**, *A.J.*, **108**, 1542
- [42] Dinshaw, N., Impey, C.D., Foltz, C.B., Weymann, R.J., and Chaffee, F.H. 1994. **Common Lyman α Absorption Toward the QSO Pair 1343+2640A,B: Evidence for Large and Quiescent Clouds**, *Ap.J.Lett.*, **437**, L87
- [43] Sprayberry, D., Bernstein, G., Impey, C.D., and Bothun, G.D. 1995. **The Mass-to-Light Ratios of Low Surface Brightness Spiral Galaxies: Clues from the Fisher-Tully Relation**, *Ap.J.*, **438**, 72
- [44] Sprayberry, D., Impey, C.D., Bothun, G.D., and Irwin, M.J. 1995. **Properties of the Class of Low Surface Brightness Disk Galaxies**, *A.J.*, **109**, 558
- [45] Impey, C.D., Malkan, M.A., Webb, W., and Petry, C.E. 1995. **Ultraviolet Spectropolarimetry of High Redshift Quasars with HST**, *Ap.J.*, **440**, 80
- [46] Elowitz, R.M., Green, R.F., and Impey, C.D. 1995. **Search for Correlations of Lyman Alpha Clouds and Metal Systems on Closely Spaced Lines of Sight**, *Ap.J.*, **440**, 458
- [47] Dinshaw, N., Foltz, C.B., Impey, C.D., Weymann, R.J., and Morris, S.L. 1995. **The Large Characteristic Size of Lyman Alpha Forest Clouds**, *Nature*, **373**, 223

- [48] Hooper, E.J., Impey, C.D., Foltz, C.B., and Hewett, P.C. 1995. **Radio Emissions of Optically-Selected Quasars**, *Ap.J.*, **445**, 62
- [50] Dinshaw, N. and Impey, C.D. 1996. **Two-Point Velocity and Spatial Correlation Functions of the CIV Absorbers toward the Tololo Quasar Group: Evidence for Superclustering at $z = 2$** , *Ap.J.*, **458**, 73
- [51] Impey, C.D., Foltz, C.B., Petry, C., Browne, I.W.A., and Patnaik, A.R. 1996. **Hubble Space Telescope Observations of the Gravitational Lens System B1422+231**, *Ap.J.Lett.*, **462**, L53
- [52] Impey, C.D., Petry, C., Malkan, M.A., and Webb, W. 1996. **Spectroscopy of Bright Quasars with the Hubble Space Telescope and Lyman-alpha Absorption Lines in the Redshift Range $0.5 < z < 1.8$** , *Ap.J.*, **463**, 473
- [53] Sprayberry, D., Impey, C.D., and Irwin, M.J. 1996. **Low Surface Brightness Galaxies in the Local Universe. II. Selection Function and Completeness of the APM Survey**, *Ap.J.*, **463**, 535
- [54] Perlman, E., Stocke, J., Schachter, J., Elvis, M., Urry, C., Potter, M., Impey, C.D., and Kolchinsky, P. 1996. **The Einstein Slew Survey Sample of BL Lac Objects**, *Ap.J.Supp.*, **104**,251
- [55] Impey, C.D., Sprayberry, D., Irwin, M.J., and Bothun, G.D. 1996. **Low Surface Brightness Galaxies in the Local Universe. I. The Catalog**, *Ap.J.Supp.*, **105**, 209
- [56] Flint, K. and Impey, C.D. 1996. **Large Scale Structure in the Direction of the Virgo Cluster**, *A.J.*, **112**,865
- [57] Marcha, M.J.M., Browne, I.W.A., Impey, C.D. and Smith, P.S. 1996. **Optical Spectroscopy and Polarisation of a New Sample of Optically Bright Flat Spectrum Radio Sources**, *M.N.R.A.S.*, **281**,425
- [58] Hooper, E., Impey, C.D., Foltz, C.B. and Hewett, P.C. 1996. **The Radio Properties of Optically Selected Quasars. III. Comparison Between Optical and X-Ray Selected Samples**, *Ap.J.*, **473**, 746
- [59] Impey, C.D. 1996. **Quasars, Blazars, and the Gamma Ray Background**, *A.J.*, **112**, 2667
- [60] Sprayberry, D., Impey, C.D., Irwin, M.J., and Bothun, G.D. 1997. **Low Surface Brightness Galaxies in the Local Universe. III. Implications for the Field Galaxy Luminosity Function**, *Ap.J.*, **482**, 104

- [61] Impey, C.D. and Bothun, G.D. 1997. **Low Surface Brightness Galaxies**, *Ann. Rev. Ast. Ap.*, **35**, 267
- [62] Bothun, G.D., Impey, C.D. and McGaugh, S.S. 1997. **Brightness Galaxies: Hidden Galaxies Revealed**, *P.A.S.P.*, **109**, 745
- [63] Yanny, B., Jannuzi, B.T., Impey, C.D. 1997. **HST Imaging of the BL Lacertae Object OJ 287**, *Ap.J.Lett.*, **484**, L113
- [64] Hooper, KJ., Impey, C.D., and Foltz, C.B. 1997. **Hubble Space Telescope Imaging of $z > 0.4$ Quasar Host Galaxies Selected by Quasar Radio and Optical Properties**, *Ap.J.Lett.*, **480**, L95
- [65] Pickering, T.K, Impey, C.D., Bothun, G.D., and van Gorkom, J. 1997. **Neutral Hydrogen Properties of Giant Low Surface Brightness Disk Galaxies**, *A.J.*, **114**, 1858
- [66] O'Neil, K., Bothun, G.D., Schombert, J., Cornell, M.K, and Impey, C.D. 1997. **A Wide Field CCD Survey for Low Surface Brightness Galaxies. II. Color Distributions, Stellar Populations, and Missing Baryons**, *A.J.*, **114**, 2448
- [67] Dinshaw, N., Weymann, R.J., Impey, C.D., Foltz, C.B., Morris, S.L., and Ake, T. 1997. **Additional Observations and Analysis of the Lyman-alpha Absorption Lines toward the QSO Pair 0107-025 A,B**, *Ap.J.*, **491**, 45
- [68] Jannuzi, B.T., Yanny, B. and Impey, C.D. 1997. **Hubble Space Telescope Imaging of the Host Galaxies of Three X-ray Selected BL Lacertae Objects**, *Ap.J.*, **491**, 146
- [69] Munoz, J.A., Falco, KK, Kochanek, C.S., Lehar, J., McLeod, B.A., Impey, C.D., Rix, H.-W., and Peng, C.Y. 1998. **The CASTLES Project**, *Ast.Sp.Sci.*, **263**, 51
- [70] Dinshaw, N., Foltz, C.B., Impey, C.D., and Weymann, R.J. 1998. **Ultraviolet Spectroscopy of the Quasar Pair LB9605, LB9612 with the Hubble Space Telescope: Evidence for Evolution in the Sizes of the Lyman Alpha Absorbers?**, *Ap.J.*, **494**, 567
- [71] O'Neil, K, Bothun, G.D., Impey, C.D., and McGaugh, S.S. 1998. **Hubble Space Telescope Wide Field Planetary Camera 2 Imaging of UGC 12695: A Remarkably Unevolved Galaxy at Low Redshift**, *A.J.*, **116**, 657
- [72] Petry, C.K, Impey, C.D. and Foltz, C.B. 1998. **Small Scale Structure in the Lyman-alpha Forest at High Redshift**, *Ap.J.*, **494**, 60

- [73] Impey, C.D., Falco, E.E., Kochanek, C.S., Lehar, J., McLeod, B.A., Rix, H.-W., Peng, C.Y., and Keeton, C.R. 1998. **An Infrared Einstein Ring in the Gravitational Lens PG 1115+080**, *Ap.J.*, **509**, 551
- [74] Campos, A., Yahil, A., Windhorst, R.A., Richards, E.A., Pascarelle, S., Impey, C.D., and Petry, C. 1999. **A Cluster or Filament of Galaxies at Redshift $z = 2.5?$** , *Ap.J.*, **511**, L1
- [75] Galama, T.J., et al. (41 authors, including C.D. Impey) 1999. **The Effect of Magnetic Fields on Gamma-Ray Bursts Inferred from Multi-Wavelength Observations of the Burst of 23 January 1999**, *Nature*, **398**, 394
- [76] Norman, D.J. and Impey, C.D. 1999. **Quasar-Galaxy Correlations: A Search for Amplification Bias**, *A.J.*, **118**, 613
- [77] Pickering, T.E., van Gorkom, J.H., Impey, C.D., and Quillen, A.C. 1999. **Kinematics and Neutral Hydrogen Properties of the Giant Low Surface Brightness Galaxy UGC 2936**, *AJ*, **118**, 765
- [78] O'Neil, K., Bothun, G.D., and Impey, C.D. 1999. **Hubble Space Telescope WFPC2 Imaging of Three Low Surface Brightness Dwarf Ellipticals in the Virgo Cluster**, *A.J.*, **118**, 1618
- [79] Falco, E.E., Impey, C.D., Kochanek, C.S., Lehar, J., McLeod, B.A., Rix, H.-W., Keeton, C.R., Munoz, J.A., and Peng, C.Y. 1999. **Dust and Extinction Curves in Galaxies with $z > 0$: The Interstellar Medium of Gravitational Lens Galaxies**, *Ap.J.*, **523**, 617
- [80] Impey, C.D., Petry, C.E., and Flint, K.P. 1999. **A Study of Lyman-alpha Quasar Absorbers in the Nearby Universe**, *Ap.J.*, **524**, 536
- [81] Peng, C.Y., Impey, C.D., Falco, E.E., Kochanek, C.S., Lehar, J., McLeod, B.A., Rix, H.-W., Keeton, C.S., and Munoz, J.A. 1999. **The Quasar Pair Q1634+267 A,B and the Binary QSO vs. Dark Lens Hypothesis**, *Ap.J.*, **524**, 572
- [82] Liu, C.T., Petry, C.E., Impey, C.D., and Foltz, C.B. 1999. **Quasars as Absorption Probes of the Hubble Deep Field**, *A.J.*, **118**, 1912
- [83] White, R.L. et al. (14 authors, including C.D. Impey) 2000. **The FIRST Bright Quasar Survey. II. 60 Nights and 1200 Spectra Later**, *Ap.J.Suppl.*, **126**, 133
- [84] Impey, C.D., Bychkov, V., Tapia, S., Gnedin, Y., and Pustilnik, S. 2000. **Rapid Polarization Variability in the BL Lacertae Object S5 0716+714**, *A.J.*, **119**, 1542

- [85] O'Neil, K., Bothun, G.D. and Impey, C.D. 2000 **Structural Characteristics of Faint galaxies Serendipitously Discovered with the Hubble Space Telescope WFPC2**, *Ap.J.Suppl.*, **128**, 99
- [86] Kochanek, C.S., Falco, E.E., Impey, C.D., Lehar, J., McLeod, B.A., Rix, H.-W., Keeton, C.R., Munoz, J.A., and Peng, C.Y. 2000. **The Infrared Einstein Ring in the Gravitational Lens MG J1131+0456 and the Death of the Dusty Lens Hypothesis**, *Ap.J.*, **535**, 692
- [87] Lehar, J., Falco, E.E., Kochanek, C.S., McLeod, B.A., Munoz, J.A., Impey, C.D., Rix, H.-W., Keeton, C.R., and Peng, C.Y. 2000. **Hubble Space Telescope Observations of 10 Two-image Gravitational Lenses**, *Ap.J.*, **536**, 584
- [88] Keeton, C.R., Falco, E.E., Impey, C.D., Kochanek, C.S., Lehar, J., McLeod, B.A., Rix, H.-W., Munoz, J.A., and Peng, C.Y. 2000. **The Host Galaxy of the Lensed Quasar Q0957+571**, *Ap.J.*, **542**, 74
- [89] Kochanek, C.S., Falco, E.E., Impey, C.D., Lehar, J., McLeod, B.A., Rix, H.-W., Keeton, C.R., Munoz, J.A., and Peng, C.Y. 2000. **The Fundamental Plane of Gravitational Lens Galaxies and the Evolution of Early-Type Galaxies in Low Density Environments**, *Ap.J.*, **543**, 131
- [90] Winn et al. (14 authors, including C.D. Impey) 2000. **PMN J1838-3427: A New Gravitationally Lensed Quasar**, *A.J.*, **120**, 2868
- [91] Munoz, J.A., Falco, E.E., Kochanek, C.S., Lehar, J., McLeod, B.A., McNamara, B., Vikhlinin, A., Impey, C.D., Rix, H.-W., Keeton, C.R., Peng, C.Y., and Mullis, C. 2001. **Multifrequency Analysis of the New Wide Separation Lens Candidate RX J0921+4529**, *Ap.J.*, **546**, 769
- [92] Impey, C.D., and Petry, C. 2001. **Radio-Quiet Quasars in the Direction of the Northern Hubble Deep Field**, *Ap.J.*, **547**, 1171
- [93] Young, P.A., Impey, C.D., and Foltz, C.B. 2001. **Observations of Lyman-alpha Absorption in a Triple Quasar System**, *Ap.J.*, **549**, 76
- [94] Norman, D. J., and Impey, C. D. 2001. **Quasar-Galaxy Correlations: A Detection of Magnification Bias**, *A.J.*, **121**, 2392
- [95] Leighly, K. M., Halpern, J. P., Helfand, D. J., Becker, R. H., and Impey, C. D. 2001. **FIRST Observations of the Second-Brightest Quasar**, *A.J.*, **121**, 2889
- [96] Finn, R. A., Impey, C. D., and Hooper, E. J. 2001. **WFPC2 Imaging of Quasar**

Environments: A Comparison of Large Bright Quasar Survey and Hubble Space Telescope Archive Quasars. *Av.J.*, **557**, 578

- [97] Rusin, D., Kochanek, C.S., Norbury, M., Falco, E.E., Impey, C.D., Lehar, J., McLeod, B. A., Rix, H.-W., Keeton, C. R., Munoz, J. A., and Peng, C. y. 2001. **B 1359+154: A Six-Image Lens Produced by a $z = 1$ Compact Group of Galaxies**, *Ap.J.*, **557**, 594
- [98] Becker, R. H., White, R. L., Gregg, M. D., Laurent-Muehleisen, S. A., Brotherton, M. S., Impey, C. D., Chaffee, F. H., Richards, G. T., Helfand, D. J., Lacy, M., Courbin, F., and Proctor, D. 2001. **The FIRST Bright Quasar Survey. III. The South Galactic Cap**, *Ap.J.Supp.*, **135**,227
- [99] Impey, C. D., Burkholder, V., and Sprayberry, D. 2001. **High and Low Surface Brightness Galaxies in the Local Universe. IV. Optical and 21 Centimeter Spectroscopy**, *A.J.*, **122**, 2341
- [100] Burkholder, V., Impey, C. D., and Sprayberry, D. 2001. **High and Low Surface Brightness Galaxies in the Local Universe. V. Optical and HI Properties**, *A.J.*, **122**, 2318
- [101] Petry, C. E., Impey, C. D., Katz, N. S., Weinberg, D. H., and Hernquist, 1. E. 2002. **Comparing Simulations and Observations of the Lyman Alpha Forest. I. Methodology**, *Ap.J.*, **566**,30
- [102] Peng, C. Y., Ho, L. C., Impey, C. D., and Rix, H.-W. 2002, **Detailed Structural Decomposition of Galaxy Images**, *A.J.*, **124**,266
- [103] Winn, J. N., Kochanek, C. S., McLeod, B. A., Falco, E. E., Impey, C. D., and Rix, H.-W. 2002, **PKS 1830-211: A Face-on Spiral Galaxy Lens**, *Ap.J.*, **575**, 103
- [104] Impey, C. D., Petry, C. E., Foltz, C. B., Hewett, P. C., and Chaffee, F. H. 2002, **LBQS 0015+0239: A Binary Quasar wih Samll Angular Separation**, *Ap.J.*, **574**, 623
- [105] Lee, J. C., Salzer, J. J., Impey, C. D., Thuan, T. X., and Gronwall, C. 2002, **HI Properties of Low Luminosity Star-Forming Galaxies in the KPNO International Spectroscopic Survey**, *A.J.*, **124**, 3088
- [106] Rusin, D., Kochanek, C., Falco, E., Keeton, C., McLeod, B., Impey, C. D., Lehar, J., Munoz, J., Peng, C. Y., and Rix, H.-W. 2003, **The Evolution of a Mass-Selected Sample of Early Type Field Galaxies**, *Ap.J.*, **587**, 143
- [107] Kuraszkiwski, J. K., et al. (14 authors, including C. D. Impey) 2003, **The Far-Infrared**

Spectral Energy Distributions of X-ray Selected Active Galaxies, *Ap.J.*, 590, 128

- [108] Impey, C.D. 2003. **Does the Universe Have an Aesthetic?**, *Memorie della Societa Astronomica Italiana*, **73**, 266
- [109] Matheson, T., et al. (56 authors, including C. D. Impey) 2003, **Photometry and Spectroscopy of GRB 030329 and Its Associated Supernova 2003dh: The First Two Months**, *A.J.*, **599**, 394
- [110] Schinnerer, E., Carilli, C., Scoville, N., Bondi, M., Ciliegi, P., Vettolani, P., Le Fevre, O., Koekemoer, A., Bertoldi, F., and Impey, C.D. 2004, **The VLA-COSMOS Survey. I. Radio Identifications from the Pilot Project**, *A.J.*, **128**, 1974
- [111] McIntosh, D., Impey, C.D., and Petry, C.E. 2004, **Quasars as Absorption Probes of the J0053+1234 Region**, *A.J.*, **128**, 544
- [112] Petry, C., Impey, C., Fenton, J., and Foltz, C. 2006, **Lyman-Alpha Absorption in the Quasar Triplet Q0107-025A, Q0107-025B, and Q0107-0232: Data Calibration and Line Selection**, *A.J.*, **132**, 2046
- [113] Peng, C., Impey, C., Rix, H.-W., Kochanek, C., Keeton, C., Falco, E., Lehar, J., and McLeod, B. 2006, **Probing the Coevolution of Supermassive Black Holes and Galaxies Using Gravitationally Lensed Quasar Hosts**, *Ap.J.*, **649**, 616
- [114] Prescott, M, Impey, C., Cool, R., and Scoville, N. 2006, **Quasars in the COSMOS Field**, *Ap.J.*, **644**, 100
- [115] Peng, C., Impey, C., Ho, L., Barton, E., and Rix, H.-W. 2006, **Probing the Coevolution of Supermassive Black Holes and Quasar Host Galaxies**, *Ap.J.*, **640**, 114
- [116] Minchin, R., Davies, J., Disney, M., Grossi, M., Sabatini, S., Boyce, P., Garcia, D., Impey, C., et al. 2007, **High Resolution HI Imaging of VIRGOHI 21—A Possible Dark Galaxy in the Virgo Cluster**, *Ap.J.*, **670**, 1056
- [117] Trump, J., Impey, C., McCarthy, P., Elvis, M., Huchra, J., Brusa, M., Hasinger, G., Schinnerer, E., Capak, P., Lilly, S., and Scoville, N. 2007, **Magellan Spectroscopy of AGN Candidates in the COSMOS Field**, *Ap.J.Supp.*, **172**, 383
- [118] Sasaki, S., et al. (29 authors, including C.D. Impey) 2007, **A Potential Galaxy Threshing System in the COSMOS Field**, *Ap.J.Supp.*, **172**, 511
- [119] Takahashi, M., et al. (34 authors, including C.D. Impey) 2007, **The [OII] 3727**

- Luminosity Function and Star Formation Rate at $z \sim 1.2$ in the COSMOS 2 Square Degree Field and the Subaru Deep Field, *Ap.J.Supp.*, 172, 456**
- [120] Manieri, V., et al. (28 authors, including C.D. Impey) 2007, **The XMM-Newton Wide-Field Survey in the COSMOS Field. IV. X-Ray Spectral Properties of Active Galactic Nuclei, *Ap.J.Supp.*, 172, 368**
 - [121] Brusa, M., et al. (34 authors, including C.D. Impey) 2007, **The XMM-Newton Wide-Field Survey in the COSMOS Field. III. Optical Identification and Multiwavelength Properties of a Large Sample of X-Ray Sources, *Ap.J.Supp.*, 172, 353**
 - [122] Finoguenov, A., et al. (33 authors, including C.D. Impey) 2007, **The XMM-Newton Wide-Field Survey in the COSMOS Field: The Statistical Properties of Clusters of Galaxies, *Ap.J.Supp.*, 172, 182**
 - [123] Smolcic, V., et al. (22 authors, including C.D. Impey) 2007, **A Wide-Angle Tail Radio Galaxy in the COSMOS Field: Evidence for Cluster Formation, *Ap.J.Supp.*, 172, 295**
 - [124] Capak, P., et al. (58 authors, including C.D. Impey) 2007, **First Release COSMOS Optical and Near-IR Data and Catalog, *Ap.J.Supp.*, 172, 99**
 - [125] Sanders, D., et al. (42 authors, including C.D. Impey) 2007, **S-COSMOS: The Spitzer Legacy Survey of the Hubble Space Telescope ACS 2 Degree COSMOS Field. I. Survey Strategy and First Analysis, *Ap.J.Supp.*, 172, 86**
 - [126] Lilly, S., et al. (77 authors, including C.D. Impey) 2007, **zCOSMOS: A Large VLT/VIMOS Redshift Survey Covering $0 < z < 3$ in the COSMOS Field, *Ap.J.Supp.*, 172, 70**
 - [127] Schinnerer, E., et al. (14 authors, including C.D. Impey) 2007, **The VLA-COSMOS Survey. II. Source Catalog of the Large Project, *Ap.J.Supp.*, 172, 46**
 - [128] Scoville, N., et al. (55 authors, including C.D. Impey) 2007, **COSMOS: Hubble Space Telescope Observations, *Ap.J.Supp.*, 172, 38**
 - [129] Taniguchi, Y., et al. (30 authors, including C.D. Impey) 2007, **The Cosmic Evolution Survey (COSMOS): Subaru Observations of the HST Cosmos Field, *Ap.J.Supp.*, 172, 9**
 - [130] Scoville, N., Aussel, H., Brusa, M., Capak, P., Carollo, C., Elvis, M., Giavalisco, M., Guzzo, L., Hasinger, G., Impey, C.D., et al. 2007, **The Cosmic Evolution Survey (COSMOS): Overview, *Ap.J.Supp.*, 172, 1**

- [131] Casey, C.M., Impey, C.D., Trump, J.R., Gabor, J., Abraham, R.G., Capak, P., Scoville, N.Z., Brusa, M., and Schinnerer, E. 2008, **Optical Selection of Faint Active Galactic Nuclei in the COSMOS Field**, *ApJ.Supp.*, **177**, 131
- [132] Casey, C.M., Impey, C.D., Petry, C.E., Marble, A.R., and Dave, R. 2008, **PC 1643+4631a,b: The Lyman-Alpha Forest at the Edge of Coherence**, *A.J.*, **136**, 181
- [133] Shioya, Y., et al. (28 authors, including C.D. Impey) 2008, **The H-Alpha Luminosity Function and Star Formation Rate at $z \sim 0.24$ in the COSMOS 2 Square Degree Field**, *ApJ.Supp.*, **175**, 128
- [134] Marble, A.R., Eriksen, K.A., Impey, C.D., Bai, L., and Miller, L. 2008, **The Flux Auto- and Cross-Correlation of the Lyman-Alpha Forest. I. Spectroscopy of QSO Pairs with Arcminute Separations and Similar Redshifts**, *ApJ.Supp.*, **175**, 29
- [135] Marble, A.R., Eriksen, K.A., Impey, C.D., Oppenheimer, B.D., and Dave, R. 2008, **The Flux Auto- and Cross-Correlation of the Lyman-Alpha Forest. II. Modeling Anisotropies with Cosmological Hydrodynamic Simulations**, *ApJ.*, **675**, 946
- [136] Gilli, R., et al. (63 authors, including C.D. Impey) 2009, **The Spatial clustering of x-Ray Selected AGN in the XMM-COSMOS Field**, *Ast.Ap.*, **494**, 33
- [137] Salvato, M. et al. (33 authors, including C.D. Impey) 2009, **Photometric Redshift and Classification for the XMM-COSMOS Sources**, *Ap.J.*, **690**, 1250
- [138] Gabor, J.M., Impey, C.D., Jahnke, K., Simmons, B.D., Trump, J.R., Koekemoer, A.M., Brusa, M., Cappelluit, N, Schinnerer, E., and Smolcic, V. 2009, **Active Galactic Nucleus Host Galaxy Morphologies in COSMOS**, *Ap.J.*, **691**, 705
- [139] Brusa, M., et al. (12 authors, including C.D. Impey) 2009, **High-Redshift Quasars in the COSMOS Survey: The Space Density of $z > 3$ X-Ray Selected QSOs**, *Ap.J.*, **693**, 8
- [140] Fiore, F., et al. (34 authors, including C.D. Impey) 2009, **Chasing Highly Obscured QSOs in the COSMOS Field**, *Ap.J.*, **693**, 447
- [141] Smolcic, V., Zamorani, G., Schinnerer, E., Bardelli, S., Bondi, M., Birzan, L., Carilli, C., Ciliegi, P., Elvis, M., Impey, C.D., et al. 2009, **Cosmic Evolution of Radio Selected Active Galactic Nuclei in the COSMOS Field**, *Ap.J.*, **696**, 24
- [142] Shioya, Y., et al. (16 authors, including C.D. Impey) 2009, **Photometric Properties of Lyman-Alpha Emitters at $z = 4.86$ in the COSMOS 2 Square Degree Field**, *Ap.J.*, **696**, 546

- [143] Trump, J.R., Impey, C.D., et al. 2009, **The COSMOS Active Galactic Nucleus Spectroscopic Survey. I. XMM-Newton Counterparts**, *Ap.J.*, **696**, 1195
- [144] Trump, J.R., Impey, C.D., et al. 2009, **Observational Limits on Type 1 Active Galactic Nucleus Accretion Rate in COSMOS**, *Ap.J.*, **700**, 49
- [145] Taniguchi, Y., et al. (21 authors, including C.D. Impey) 2009, **Hubble Space Telescope/Advanced Camera for Surveys Morphology of Lyman-Alpha Emitters at Redshift 5.7 in the COSMOS Field**, *Ap.J.*, **701**, 915
- [146] Elvis, M., et al. (33 authors, including C.D. Impey) 2009, **The Chandra COSMOS Survey. I. Overview and Point Source Catalog**, *Ap.J.Suppl.*, **184**, 158
- [147] Jahnke, K., et al. (25 authors, including C.D. Impey) 2009, **Massive Galaxies in COSMOS: Evolution of Black Hole Versus Bulge but not Versus Total Stellar Mass Over the Last 9 Gyrs?**, *Ap.J.*, **706**, L215
- [148] Trump, J.R., Impey, C.D., et al. 2009, **The Nature of Optically Dull Active Nuclei in COSMOS**, *Ap.J.*, **706**, 797
- [149] Hao, H. et al. (15 authors, including C.D. Impey) 2010, **Hot Dust-Poor Type 1 Active Galactic Nuclei in the COSMOS Survey**, *Ap.J.*, **724**, 59
- [150] Civano, F. et al. (40 authors, including C.D. Impey) 2010, **A Runaway Black Hole in COSMOS: Gravitational Wave or Slingshot Recoil?**, *Ap.J.*, **717**, 209
- [151] Brusa, M. et al. (66 authors, including C.D. Impey) 2010, **XMM-Newton Wide-field Survey in the Cosmos Field (XMM-COSMOS): Demography and Multiwavelength Properties of Obscured and Unobscured Luminous Active Galactic Nuclei**, *Ap.J.*, **716**, 348.
- [152] Peng, C.Y., Ho, L.C., Impey, C.D., and Rix, H-W. 2010, **Detailed Decomposition of Galaxy Images. II. Beyond Axisymmetric Models**, *A.J.*, **139**, 2097
- [153] Mainieri, V., et al. (61 authors, including C.D. Impey) 2010, **Ultraluminous X-ray sources out to $z \sim 0.3$ in the COSMOS Field**, *Ast.Ap.*, **514**, 85
- [154] Merloni, A., et al. (58 authors, including C.D. Impey) 2010, **On the Cosmic Evolution of the Scaling Relations Between Black Holes and Their Host Galaxies: Broad-Line Active Galactic Nuclei in the zCOSMOS Survey**, *Ap.J.*, **708**, 137

- [155] Salvato, M., et al. (65 authors, including C.D. Impey) 2011, **Dissecting Photometric Redshift for Active Galactic Nucleus Using XMM- and Chandra-COSMOS Samples**, *Ap.J.*, **742**, 61
- [156] Cisternas, M., Jahnke, K., Bongiorno, A., Inskip, K., Impey, C.D., Koekemoer, A., Merloni, A., Salvato, M., and Trump, J. 2011. **Secular Evolution and a Non-Evolving Black Hole-to-Galaxy Mass Ratio in the Last 7 Gyr**, *Ap.J.*, **741**, 11
- [157] Manieri, V., et al. (64 authors, including C.D. Impey) 2011, **Black Hole Accretion and Host Galaxies of Obscured Quasars in XMM-COSMOS**, *Ast.Ap.*, **535**, 80
- [158] Trump, J.R., Impey, C.D., Kelly, B.R., Civano, F., et al. 2011, **Accretion Rate and the Physical Nature of Unobscured Active Galaxies**, *Ap.J.*, **733**, 60
- [159] Trump, J.R., Nagao, T., Ikeda, H., Murayama, T., Impey, C.D., et al. 2011, **Spectropolarimetric Evidence for Radiatively Inefficient Accretion in an Optically Dull Active Galaxy**, *Ap.J.*, **732**, 23
- [160] Cisternas, M., et al. (24 authors, including C.D. Impey) 2011, **The Bulk of Black Hole Growth Since $z \sim 1$ Occurs in a Secular Universe: No Major Merger-AGN Connection**, *Ap.J.*, **726**, 57
- [161] Race, M., Denning, K., Bertka, C., Dick, S., Harrison, A., Impey, C.D., and Mancinelli, R. 2012, **Astrobiology and Society: Building Interdisciplinary Research Community**, *Astrobiology*, **12**, 958
- [162] Elvis, M., et al. (42 authors, including C.D. Impey) 2012, **Spectral Energy Distributions of Type 1 Active Galactic Nuclei in the COSMOS Survey. I. The XMM-COSMOS Sample**, *Ap.J.*, **759**, 6
- [163] Lusso, E., et al. (28 authors, including C.D. Impey) 2012, **Bolometric Luminosities and Eddington Ratios of X-ray Selected Active Galactic Nuclei in the XMM-COSMOS Survey**, *M.N.R.A.S.*, **425**, 623
- [164] Civano, F. et al. (32 authors, including C.D. Impey) 2012, **The Chandra COSMOS Survey. III. Optical and Infrared Identifications of X-Ray Point Sources**, *Ap.J.Suppl.*, **201**, 30
- [165] Masters, D., Capak, P., Salvato, M, Civano, F., Mobasjer, B., Siana, B., Hasinger, G., Impey, C.D. et al. 2012, **Evolution of the Quasar Luminosity Function over $3 < z < 5$ in the COSMOS Survey Field**, *Ap.J.*, **755**, 169

- [166] Donley, J.L., Koekmoer, A., Brusa, M., Capak, P., Cardamone, C., Civano, F., Ilbert, O., Impey, C.D. et al. 2012, **Identifying Luminous Active Galactic Nuclei in Deep Surveys: Revised IRAC Selection Criteria**, *Ap.J.*, **748**, 142
- [167] Iwasawa, K., Mainieri, V., Brusa, M., Comastri, A., Gilli, R., Vignali, C., Hasinger, G., Sanders, D., Capelluti, N., Impey, C.D., et al. 2012, **Fe K emission from Active Galaxies in the COSMOS Field**, *Ast.Ap.*, **537**, 86
- [168] Schneider, E.E., Impey, C.D., Trump, J.R., and Salvato, M. 2013, **Steps Toward Unveiling the True Population of AGN: Photometric Characterization of AGN in COSMOS**, *Ap.J.*, **466**, 123
- [169] Hao, H., et al. (22 authors, including C.D. Impey) 2013, **A Quasar-Galaxy Mixing Diagram: Quasar Spectral Energy Distribution Shapes in Optical to Near-Infrared**, *M.N.R.A.S.*, **434**, 3104
- [170] Hao, H. et al. (21 authors, including C.D. Impey) 2014, **The Spectral Energy Distributions of Type 1 AGN in XMM-COSMOS – II. Shape Evolution**, *M.N.R.A.S.*, **438**, 1288

19 Published Conference Proceedings

- [1] Impey, C.D. 1986. **IRAS Observations of Active Galactic Nuclei**, in *Continuum Emission in Active Galactic Nuclei*, ed. M. Sitko (Kitt Peak National Observatory: Tucson), p. 1
- [2] Impey, C.D. 1987. **Superluminal Radio Sources: Optical, Infrared, UV and X-ray Properties**, in *Superluminal Radio Sources*, eds. J. A. Zensus, and T.J. Pearson (Cambridge University Press: Cambridge), p. 233
- [3] Impey, C.D. 1989. **Energy Distributions of Blazars**, in *BL Lac Objects: 10 Years After*, eds. L. Maraschi, T. Maccararo and M.-H. Ulrich (Springer-Verlag: Dordrecht), p. 149
- [4] Impey, C.D. 1992. **Blazars: Faster than Light?**, in *Variability of Blazars*, eds. E. Valtaoja and M. Valtonen (Cambridge University Press: Cambridge), p. 55
- [5] Impey, C.D. 1993. **Surveys of Low Surface Brightness Galaxies**, in *Sky Surveys: Protostars to Protogalaxies*, ed. T. Soifer (ASP Conference Series), p. 145
- [6] Stocke, J., Perlman, E., Granados, A., Schachter, J., Elvis, Urry, M., Impey, C.D., and Smith, P.S. 1993. **Finding the Rarest Objects in the Universe: A New, Efficient Method for Discovering BL Lac Objects**, in *The Evolution of Galaxies and Their Environment*, eds. D. Hollenbach, H. Thronson, and J.M. Shull (Moffett Field: NASA), p. 311

- [7] Impey, C.D. 1994. **Energy Distributions of AGN**, in *The Nature of Compact Objects in Active Galactic Nuclei*, ed. A. Robinson (Cambridge University Press), p. 131
- [8] Impey, C.D. 1994. **AGN Across the Electromagnetic Spectrum**, in *Frontiers of Space and Ground-based Astronomy*, eds. W. Wamsteker, M.S. Longair and Y. Kondo (Kluwer Academic Publishers: Dordrecht), p. 685
- [9] Impey, C.D. 1995. **Life in the Universe: A Humanistic View?**, *The Inspiration of Astronomical Phenomena*, Rocca di Papa, Italy, to be published in *Vistas in Astronomy*
- [10] Impey, C.D. and Dinshaw, N. 1995. **Large Scale Structure at High Redshift**, in *ESO Workshop on Quasar Absorption Lines*, ed. G. Meylan (Springer-Verlag: Berlin), p. 365
- [11] Dinshaw, N., Foltz, C., Impey, C.D., Weymann, R., and Morris, S. 1995. **Evidence for Large Quiescent Lyman-alpha Clouds from HST UV Spectroscopy of the Quasar Pair QO107-025A,B**, in *ESO Workshop on Quasar Absorption Lines*, ed. G. Meylan (Springer-Verlag: Berlin), p. 323
- [12] Dinshaw, N., Impey, C.D., Foltz, C., Weymann, R., and Chaffee, F. 1995. **Common Lyman-alpha Absorption Towards the Quasar Pair Q1343+264A,B**, in *ESO Workshop on Quasar Absorption Lines*, ed. G. Meylan (Springer-Verlag: Berlin), p. 329
- [13] Impey, C.D. 1996. **The Big Picture from Radio Waves to Gamma Rays**, in *LAU Symposium 175: Extragalactic Radio Sources*, ed. C. Fanti (Kluwer Academic Publishers: Dordrecht), p. 281
- [14] Impey, C.D., Hooper, E., Foltz, C., and Hewett, P. 1996. **The Radio and Optical Properties of Quasars**, in *LAU Symposium 175: Extragalactic Radio Sources*, ed. C. Fanti (Kluwer Academic Publishers: Dordrecht), p. 252
- [15] Impey, C.D. 1996. **The Opacity of Low Surface Brightness Galaxies and Quasar Absorption**, in *New Extragalactic Perspectives: Gas, Cold Dust and Morphology*, ed. D. Block (Springer-Verlag: Berlin), p. 505
- [16] Impey, C.D. 1997. **Seeing Double: Probing the Universe with Quasar Pairs**, in *37th Herstmonceux Conference on HST and the High Redshift Universe*, ed. N. Tanvir (Cambridge University Press: Cambridge), p. 317
- [17] Hooper, E.J., Impey, C.D., and Foltz, C.B. 1997. **HST Imaging of Quasar Host Galaxies Selected by Quasar Radio and Optical Emission**, in *ESO-LAC Conference on Quasar Hosts*, eds. D.L. Clements and I. Perez-Fournon (Springer-Verlag), p. 206
- [18] Impey, C.D. 1997. **Quasar Pairs and Large Scale Structure**, in *LAP Workshop on Structure and Evolution of the Intergalactic Medium from QSO Absorption Line Systems*, eds. P.

Petitjean and S. Charlot (Editions Frontieres: Paris), p. 173

- [19] Becker, R.H., Gregg, M.D., Laurent-Meuilheisen, S.A., White, R.L., Helfand, D.J., McMahon, R.G., Oegerle, W., Friedman, S., Richards, G., York, D., Rockosi, C., and Impey, C.D. 1997. **BAL Quasars in the VLA FIRST Survey**, in *Mass Ejection from Active Galaxies*, eds. N. Aravn et al. (ASP Conference Series Vol. 128), p. 31
- [20] Pickering, T.E., Navarro, J.F., Rix, H.-W., and Impey, C.D. 1998. **Rotation Curves of Low Surface Brightness Galaxies**, in *Galactic Halos: A UC Santa Cruz Workshop*, ed. D. Zaritsky (ASP Conference Series Vol. 136), p. 199
- [21] Impey, C.D. 1998. **Quasar Pairs as Probes of Large Scale Structure**, in *The Young Universe: Galaxy Formation and Evolution at Intermediate and High Redshift*, ed. S. D'Odorico et al. (ASP Conference Series Vol. 146), p. 391
- [22] Impey, C.D. 1998. **Seeing Double: Probing the Universe with Quasar Pairs**, in *Structure and Evolution of the Intergalactic Medium from QSO Absorption Line Systems*, eds. P. Petitjean and S. Charlot (Editions Frontiere), p. 173
- [23] Impey, C.D. 1999. **What We Don't Know About the Universe**, in *Low Surface Brightness Universe*, eds. J.1. Davies, C.D. Impey, and S. Phillipps (ASP Conference Series Vol. 170), p. 393
- [24] Hooper, E., Wilkes, B., McLeod, K., McDowell, J., Elvis, M., Malkan, M., Lonsdale, C.J., and Impey, C.D. 1999. **The U.S. ISO Key Project for Quasars**, in *Astrophysics with Infrared Surveys: A Prelude to SIRTf*, eds. M. Bica et al. (ASP Conference Series Vol. 177), p. 153
- [25] Wilkes, B.J., Hooper, E.J., McLeod, K.K., Elvis, M., Impey, C.D., Lonsdale, C.J., Malkan, M., and McDowell, J. 1999. *The Far-Infrared Continuum of Quasars*, in *The Universe as Seen by ISO*, eds. P. Cox and M. Kessler (ESA-SP 427), p. 845
- [26] Hooper, E.J., wilkes, B.J., McLeod, K.K., Elvis, M., Impey, C.D., Lonsdale, C.J., Malkan, M., and McDowell, J. 1999. *The U.S. Key Project on AGN Spectral Energy Distributions*, in *The Universe as Seen by ISO*, eds. P. Cox and M. Kessler (ESA-SP 427), p. 893
- [27] Kochanek, C.S., Falco, E.E., Impey, C.D., Lehar, J., McLeod, B.A., and Rix, H.- W. 1999. **Results from the CASTLES Survey of Gravitational Lenses**, in *After the Dark Ages: When Galaxies Were Young*, eds. S. Holt and E. Smith (AIP Press), p. 163
- [28] Wilkes, B.J. et al. (10 authors, including C.D. Impey) 2000. **Infrared Properties of High Redshift and X-Ray Selected AGN Samples**, in *ISO Surveys of a Dusty Universe*, eds. D. Lemke et al. (Springer-Verlag Lecture Notes in Physics, Vol 548), p. 177

- [29] Tapia, S., Impey, C.D., Gnedin, Y, and Bychkov, V. 2000. **Polarimetric Variability of the Polar AM Her at Low State**, in *Magnetic Fields of Chemically Peculiar and Related Stars*, eds. Y Glagolevskij and I. Romanyuk (Russian Academy of Sciences), p. 237
- [30] Tapia, S., Impey, C.D., Gnedin, Y, and Bychkov, V. 2000. **Study of Polarimetric Variability of the Magnetic Cataclysmic Variable BY Camelopardalis**, in *Magnetic Fields of Chemically Peculiar and Related Stars*, eds. Y. Glagolevskij and I. Romanyuk (Russian Academy of Sciences), p.240
- [31] Impey, C. D. 2001, **The Cosmological Significance of Low Surface Brightness Galaxies**, in *Galaxy Disks and Disk Galaxies*, eds. J. Funes and E. Corsini (ASP Conference Series Vol. 230), p. 593
- [32] Munoz, J. A., Falco, E. E., Kochanek, C. S., McLeod, B. A., Lehar, J., Impey, C. D., Keeton, C. R., Rix, H.-W., and Peng, C. Y. 2001, **Host Galaxies: A New Approach to Distinguish Lensed and binary Quasars**, in *Highlights of Spanish Astrophysics*, eds. J. Zamorano, J. Gorgas, and J. Gallego (Dordrecht: Kluwer), p. 57
- [33] Falco, E. E., Kochanek, C. S., Lehar, J., McLeod, B. A., Munoz, J. A., Impey, C. D., Keeton, C., Peng, C. Y., and Rix, H.-W. 2001, **The CASTLES Gravitational Lensing Tool**, in *Gravitational Lensing: Recent Progress and Future Goals*, eds. T. Brainerd and C. Kochanek (ASP Conference Series Vol. 237), p. 25
- [34] Munoz, J. A., Falco, E. E., Kochanek, C. S., Lehar, J., McLeod, B. A., McNamara, B. R., Vikhlinin, A. A., Munoz, Impey, C. D., Keeton, C., Peng, C. Y., and Rix, H.-W. 2001, **A New Wide-Separation Gravitational Lens Candidate: RXJ 0921+4529**, in *Gravitational Lensing: Recent Progress and Future Goals*, eds. T. Brainerd and C. Kochanek (ASP Conference Series Vol. 237), p. 49
- [35] Kochanek, C. S., Falco, E. E., Impey, C. D., Lehar, J., McLeod, B. A., Rix, H.-W., Keeton, C., Munoz, J. A., and Peng, C Y. 2001, **The Evolution of Graviational Lens Galaxies**, in *Gravitational Lensing: Recent Progress and Future Goals*, eds. T. Brainerd and C. Kochanek (ASP Conference Series Vol. 237), p. 159
- [36] Rix, H.-W., Falco, E. E., Impey, C. D., Kochanek, C. S., Lehar, J., McLeod, B. A., Munoz, J. A., and Peng, C. Y. 2001, **Host Galaxies of Lensed Luminous Quasars at $z = 2$** , in *Gravitational Lensing: Recent Progress and Future Goals*, eds. T. Brainerd and C. Kochanek (ASP Conference Series Vol. 237), p. 169
- [37] McLeod, B. A., Falco, E. E., Kochanek, C. S., Lehar, J., Munoz, J. A., Impey, C. D., Keeton, C., and Peng, C. Y. 2001, **The Interstellar Medium of Lens Galaxies**, in *Gravitational Lensing: Recent Progress and Future Goals*, eds. T. Brainerd and C. Kochanek (ASP Conference Series Vol. 237), p. 177

- [38] Norman, D. J., and Impey, C. D. 2001, **Quasar-Galaxy Correlations due to Magnification Bias**, in *Gravitational Lensing: Recent Progress and Future Goals*, eds. T. Brainerd and C. Kochanek (ASP Conference Series Vol. 237), p. 209
- [39] Finn, R. A., Impey, C. D., and Hooper, E. J. 2001, **WFPC2 Imaging of Quasar Environments**, in *QSO Hosts and their Environments*, eds. I. Marquez et al. (Dordrecht: Kluwer/Plenum), p. 133
- [40] Impey, C. D., Rix, H.-W., McLeod, B., Peng, C., Keeton, C., Kochanek, C., Falco, E., Lehar, J., and Munoz, J. 2001, **Gravitationally Lensed Quasar Host Galaxies**, in *QSO Hosts and their Environments*, eds. I. Marquez et al. (Dordrecht: Kluwer/Plenum), p. 313
- [41] Impey, C. D. 2002, **How Well Do We Understand the Local Universe?**, in *Extragalactic Gas at Low Redshift*, eds. J. Mulcahey and J. Stocke (ASP Conference Series Vol. 254), p. 1
- [42] Petry, C. E., Impey, C. D., Katz, N. S., Weinberg, D. H., and Hernquist, L. H. 2002, **Lyman-alpha Absorbers at $z = 2$: Direct Comparison of Observations and Hydrodynamic Simulations**, in *Extragalactic Gas at Low Redshift*, eds. J. Mulcahey and J. Stocke (ASP Conference Series Vol. 254), p. 161
- [43] Marble, A. R., Impey, C. D., and Petry, C. E. 2003, **A 50 Gpc Hike Through the Lyman-alpha Forest**, in *The IGM/Galaxy Connection: The Distribution of Baryons at $z = 0$* , eds. J. Rosenberg and M. Putman (Dordrecht: Kluwer), p. 81
- [44] Petry, C., Marble, A. R., Impey, C. D., and Dave, R. 2003, **Skewering the Cosmic Web with Quasars**, in *The IGM/Galaxy Connection: The Distribution of Baryons at $z = 0$* , eds. J. Rosenberg and M. Putman (Dordrecht: Kluwer), p. 285
- [45] Impey, C. D. 2003, **Baryons in the Local Universe**, in *The IGM/Galaxy Connection: The Distribution of Baryons at $z = 0$* , eds. J. Rosenberg and M. Putman (Dordrecht: Kluwer), p. 335
- [46] Petry, C.E., Eriksen, K., Marble, A., Lei, B., and Impey, C.D. 2004, **Cosmology with Quasar Pairs**, in *Measuring and Modeling the Universe: Carnegie Observatories Centennial Symposium*, ed. W.L. Freedman, Carnegie Observatories, online publication
- [47] Marble, A.R., Petry, C.E., Impey, C.D., and Dave, R. 2004, **Skewering the Cosmic Web with Quasars**, in *Measuring and Modeling the Universe: Carnegie Observatories Centennial Symposium*, ed. W.L. Freedman, Carnegie Observatories, online publication
- [48] Impey, C.D. 2004, **Quasars as Cosmological Probes**, in *Measuring and Modeling the Universe: Carnegie Observatories Centennial Symposium*, ed. W.L. Freedman, The Carnegie Observatories, online publication

- [49] Peng, C.Y., Impey, C.D., Falco, E., Keeton, C., Kochanek, C.S., Lehar, J., McLeod, B., Munoz, J., Rix, H.-W., and Rusin, D. 2004, **Lensed Quasar Host Galaxies**, in *Coevolution of Black Holes and Galaxies: Carnegie Observatories Centennial Symposium*, ed. L.C. Ho, Carnegie Observatories, online publication
- [50] Eriksen, K., Marble, A., Impey, C.D., Lei, B., and Petry, C.E. 2005, **The Alcock-Paczynski Test for the Lyman-alpha Forest: First Results from Magellan and the MMT**, in *Observing Dark Energy, ASP Conference Series, Volume 339*, ed. S. Woolf and T. Lauer, p. 172.
- [51] Peng, C., Impey, C., Rix, H.-W., Falco, E., Keeton, C., Kochanek, C., Lehar, J., and McLeod, B. 2006, **Lensed Quasar Hosts**, in *QSO Host Galaxies: Environments and Evolution*, New Astronomy Reviews, Vol. 50, p. 689
- [52] Peng, C., Impey, C., Rix, H.-W., Kochanek, C., Keeton, C., Falco, E., Lehar, J., and McLeod, B. 2006, **Probing the Coevolution of Supermassive Black Holes and Galaxies out to $z = 4.5$ Using Quasar Host Galaxies**, in *Black Holes from Stars to Galaxies - Across the Range of Masses*, IAU Symposium 236, ed. V. Karas and G. Matt, p. 45
- [53] Impey, C.D. 2006, **The Evolution of Supermassive Black Holes and Galaxies in the COSMOS Survey**, in *Black Holes from Stars to Galaxies - Across the Range of Masses*, IAU Symposium 236, p. 26
- [54] Trump, J., Impey, C., Gabor, J., McCarthy, P., Elvis, M., Huchra, J., Brusa, M., Hasinger, G., Schinnerer, E., and Scoville, N. 2007, **A Multi-Wavelength Survey of AGN with COSMOS: Do Low-Eddington Ratio Type 1 AGN Exist?**, in *The Central Engine of Active Galactic Nuclei*, ASP Conference 373, p. 726
- [55] Impey, C.D. 2007, **Dim Baryons in the Cosmic Web**, in *Dark Galaxies and Lost Baryons*, IAU Symposium 244, p. 157
- [56] Impey, C.D., Trump, J., McCarthy, P., Elvis, M., Huchra, J., Scoville, N., Lilly, S., Brusa, M., Hasinger, G., Schinnerer, E., Capak, P., and Gabor, J. 2007, **A Survey of AGN and Supermassive Black Holes in the COSMOS Survey**, in *Black Holes from Stars to Galaxies—Across the Range of Masses*, IAU Symposium 238, ed. V. Karas and G. Matt, p. 287
- [57] Minchin, R., Disney, M., Davies, J., Marble, A., Impey, C., et al. 2007, **A Dark Galaxy in the Virgo Cluster Imaged at 21-cm**, in *Island Universes*, Astrophysics and Space Science Proceedings, p. 101
- [58] Impey, C.D. 2009, **Seeing the Universe: On the Cusp of Technology**, in *Cosmology Across Cultures*, ASP Conference Series 409, ed. J.A. Rubino-Martin, J.A. Belmonte, F. Prada,

and A. Alberdi, p. 82

- [59] Moffett, A.J., Kannappan, S.J., Laine, S., Wei, L.H., Baker, A.J., and Impey, C. D. 2010, **Extended Light in E/S0 Galaxies and Implications for Disk Rebirth**, in *Galaxy Wars: Stellar Populations and Star Formation in Interacting Galaxies*, ASP Conference Series Vol. 423, ed. B. Smith, N. Bastian, S. Higdon, and J. Higdon, p. 346
- [60] Impey, C.D., Trump, J.R., and Gabor, J.M. 2011, **AGN and Host Galaxies in the COSMOS Survey**, in *Tracing the Ancestry of Galaxies*, IAU Symposium 277, p. 21
- [61] Baross, J., and Impey, C.D. 2012, **Astrobiology: A New Synthesis**, in *Frontiers of Astrobiology*, ed. C.D. Impey, J.I. Lunine, and J. Funes, S.J. (Cambridge: Cambridge University Press), p. 5.
- [62] Tarter, J., and Impey, C.D. 2012, **If You Want to Talk to ET, You Must First Find ET**, in *Frontiers of Astrobiology*, ed. C.D. Impey, J.I. Lunine, and J. Funes, S.J. (Cambridge: Cambridge University Press), p. 286.
- [63] Impey, C.D. 2014, **Cosmology and the Human Condition**, in *The Science and Religion Dialog: Past and Future*, ed. M. Welker (Frankfurt: Peter Lang), p. 173.
- [64] Impey, C.D. 2014, **The Inspiration of Astronomical Phenomena**, in *Proceedings of the Seventh Conference on the Inspiration of Astronomical Phenomena*, ed. N. Champion and R. Sinclair, *Culture and Cosmos*, Vol. 16, Nos. 1 and 2, p. 5.

20 Educational Grants Awarded

- [1] National Science Foundation, **A Master of Science Program for Advancing the Science Skills of Middle and Secondary School Teachers**, Co-PI, \$458,475 awarded, (1 October 1989 - 30 September 1992)
- [2] NASA, **The Arizona Space Grant College Consortium, Associate Director**, \$1,105,000 awarded, (1 September 1989 - 31 August 1994)
- [3] NASA Grant Supplement for Education, **Creation of a Science Mentor Program**, PI, \$4,534 awarded, (1 June 1992 - 30 May 1993)
- [4] NASA Training Grant to Eric J. Hooper, **The Radio Properties and Cluster Environments of Optically Selected Quasars**, Co-PI, \$66,000 awarded, (1 August 1993 - 31 July 1996)
- [5] National Science Foundation, **Research Experience for Undergraduates - A**

- Supplement to Quasar Research**, PI, \$7,154 awarded, (1 *September* 1994 - 31 *August* 1995)
- [6] NASA, **The Arizona Space Grant College Consortium**, Associate Director, \$1,900,000 awarded, (1 *February* 1995 - 31 *January* 2000)
 - [7] NASA Education Division, **Development of a Science Mentoring Program**, PI, \$5,898 awarded, (1 *January* 1996 - 31 *December* 1996)
 - [8] NASA Education Division, **IDEAS Program, Interactive Computer Tools for the Planetarium**, PI, \$9,900 awarded, (1 *February* 1998 - 31 *July* 1999)
 - [9] National Science Foundation, **Astronomy and Science Literacy**, PI, \$59,000 awarded, (1 *October* 1998 - 30 *September* 1999)
 - [10] National Science Foundation, **The Creation of Networked Interactive Teaching Tools for Astronomy and Physics**, PI, \$186,021 awarded, (1 *October* 1998 - 30 *September* 2002)
 - [11] National Academy of Sciences V.M. Slipper Award, **Networked Interactive Materials for Teaching Astronomy**, PI, \$827 awarded, (1 *September* 1998 - 1 *September* 1999)
 - [12] National Science Foundation, **Interactive Computer Tools for the Planetarium**, PI, \$48,921 awarded, (1 *January*, 1999 - 31 *December*, 1999)
 - [13] NASA Education Division, IDEAS Program, **An Expert System for Astronomy**, PI, \$25,308 awarded, (1 *September* 2001 - 31 *August*, 2002)
 - [14] NASA Hubble Fellowship to Romeel Dave, **Understanding the Evolution of the Intergalactic Medium**, PI, \$229,829 awarded, (1 *November*, 2000 - 31 *October*, 2003)
 - [15] NASA Hubble Space Telescope Education/Public Outreach Program, **Data-Driven Web Tools for Teaching Astronomy**, PI, \$39,885 awarded, (1 *August*, 2001 - 31 *July*, 2003)
 - [16] National Science Foundation, **Using Technology to Transform Teaching and Learning: Data-Driven Enquiry & Collaborative Learning in Introductory Astronomy Courses**, co-I, \$85,372 awarded, (1 *May*, 2002 - 30 *April*, 2004)
 - [17] NASA Long Term Space Astrophysics Education/Public Outreach Program, **Quasars as Probes**, PI, \$43,132 awarded, (1 *April*, 2001 - 31 *March*, 2005)
 - [18] National Science Foundation, **Distinguished Teaching Scholar: New Technologies for Teaching Introductory Astronomy**, PI, \$304,963 awarded, (1 *June*, 2002 - 31 *May*, 2006)

- [19] National Science Foundation, **The CONCAM Undergraduate Education Project**, co-PI, \$18,749 awarded, (1 *August, 2003 - 31 July, 2004*)
- [20] Internet Technology, Commerce and Design Institute Grant, PI, **The Future Wireless Student**, \$15,000 awarded, (1 *January 2003 - 31 December 2003*)
- [21] National Science Foundation, **New Collaborative Learning Environments for the Teaching of Astronomy**, PI, \$48,824 awarded, (1 *September, 2002 - 31 August, 2005*)
- [22] National Science Foundation, Small Grants for Exploratory Research, **Lifelong Learning and the Wireless Internet**, PI, \$129,426 awarded, (1 *July 2005 - 30 June 2007*)
- [23] National Science Foundation, **The CONCAM Undergraduate Education Project**, co-PI, \$18,749 awarded, (1 *August, 2003 - 31 July, 2006*)
- [24] NASA, E/PO Program, **Tools for Teaching Astronomy**, PI, \$39,743 awarded, (1 *February 2004 - 31 January 2007*)
- [25] NASA, Hubble Space Telescope Legacy Outreach Program, **The ACS Mosaic of M51 and the Intersection of Research and Education**, PI, \$45,000 awarded, (1 *December 2005 - 30 November 2007*) 52]
- [26] The Templeton Foundation, Program for the Constructive Engagement of Science and Religion, Outreach Supplement, **Astrobiology and the Sacred**, PI, \$60,000 awarded, (1 *May, 2004 - 30 April, 2008*)
- [27] The Templeton Foundation, **Astrobiology and the Sacred: Confronting the Fermi Question**, PI, \$52,800 awarded, (1 *June 2007 – 31 May 2008*)
- [28] National Science Foundation, Education Center Grant, **Community of Astronomy Teaching Scholars (CATS)**, PI, \$1,999,997 awarded, (1 *September 2007 – 31 August, 2010*)
- [29] NASA, History of the Scientific Exploration of Earth and Space Program, **Dreams of Other Worlds: NASA and the Vision of Space**, PI, \$246,236 awarded, (21 *June, 2007 – 20 June, 2010*)
- [30] National Science Foundation, **The California-Arizona Minority Partnership for Astronomy Research and Education (CAMPARE)**, co-I, \$395,352 awarded, (14 *July, 2009 – 15 July, 2014*)
- [31] John Templeton Foundation, **Humble Before the Void: Teaching Cosmology to**

Buddhist Monks, PI, \$44,453 awarded, (1 November, 2011 – 31 October, 2012)

- [32] National Science Foundation, **The California-Arizona Minority Partnership for Astronomy Research and Education (CAMPARE)**, co-I, \$45,288 awarded, (15 September, 2013 – 31 August, 2014)
- [33] National Science Foundation, **Investigating the Landscape of Undergraduate Science Literacy**, PI, \$190,369 awarded, (15 September, 2013 – 31 August, 2015)
- [34] Howard Hughes Medical Institute, **Towards a Next Generation Online Science Class**, PI, \$1,000,000 awarded, (1 September, 2014 – 31 August, 2019)

21 Astronomy Grants Awarded

- [1] NASA HEAO-2 Guest Investigator Program, **Blazars and Quasars in a Complete Radio Sample**, CO-IPI, \$7,627 awarded, (1 August 1985 - 31 July 1986)
- [2] NASA IRAS Guest Investigator Program (1985), **Reprocessed IRAS Data for Radio Strong Quasars**, Co-PI, \$24,000 awarded, (1 August 1985 - 31 July 1986)
- [3] NASA IRAS Guest Investigator Program (1986), **IRAS Data for Extragalactic Radio Sources**, Co-PI, \$18,569 awarded, (1 June 1986 - 30 May 1987)
- [4] NSF US-Chinese Cooperative Science Program, **Low Surface Brightness Galaxies and Quasars**, Co-PI, \$46,859 awarded, (1 August 1986 - 31 July 1989)
- [5] NASA SADAP Program, **The Continuum Properties of Strong Radio Sources**, PI, \$20,598 awarded, (1 July 1987 - 31 June 1988)
- [6] National Science Foundation, **QSO Research**, Co-PI, \$97,473 awarded, (1 October 1987 - 30 September, 1989)
- [7] NATO Collaborative Program, **A Study of Radio Galaxy Cores**, PI, \$11,256 awarded, (1 April, 1988 - 31 March, 1990)
- [8] NASA ADP Program, **Continuum Properties of Active Galactic Nuclei**, PI, \$9,000 awarded, (1 July 1988 - 30 June 1989)
- [9] National Science Foundation, **A Study of Galaxy Formation with Near Infrared Imaging**, Co-PI, \$120,500 awarded, (1 November 1988 - 31 October 1991)
- [10] NASA ADP Program, **Infrared Properties of Strong Radio Sources**, PI, \$70,000

awarded, (1 *June* 1989 - 31 *May* 1991)

- [11] National Science Foundation, **Quasar Research**, Co-PI, \$258,350 awarded, (1 *July* 1990 - 30 *June* 1993)
- [12] National Science Foundation, **The Properties of Low Surface Brightness Galaxies**, PI, \$65,785 awarded, (1 *July* 1990 - 30 *June* 1993)
- [13] Dudley Observatory, **The Study of Large Scale Structure at High Redshift**, PI, \$5,000 awarded, (1 *October* 1990 - 30 *September* 1991)
- [14] NASA ADP Program, **Emission Mechanisms in Strong Radio Sources**, PI, \$30,000 awarded, (1 *June* 1991 - 31 *May* 1992)
- [15] NASA Hubble Space Telescope General Observer Program, Cycle 1, **Optical Spectropolarimetry of Bright Quasars**, PI, \$78,441 awarded, (1 *December* 1991 - 30 *November* 1992)
- [16] NASA ROSAT Guest Observer Program, **High Redshift QSOs and the X-ray Background, PI**, \$25,000 awarded, (1 *October* 1991 - 30 *September* 1992)
- [17] NASA ADP Program, **ISO Key Project: Exploring the Full Range of Quasar and AGN Properties, Co-I**, \$623,976 awarded, (1 *April* 1992 - 31 *March* 1997)
- [18] NASA Hubble Space Telescope General Observer Program Cycle 2, **Optical Spectropolarimetry of Bright Quasars**, PI, \$55,678 awarded, (1 *August* 1992 - 31 *July* 1993)
- [19] NASA Hubble Space Telescope General Observer Program, Cycle 2, **Imaging of BL Lac Host Galaxies and Environments**, PI, \$85,000 awarded, (1 *August* 1992 - 31 *July* 1993)
- [20] NASA Hubble Space Telescope General Observer Program, Cycle 3, **A Study of the Arcsecond Gravitational Lens 1422+321**, PI, \$81,920 awarded, (1 *August* 1993 - 31 *July* 1994)
- [21] NATO Collaborative Program, **A Survey for Bright and High Redshift Quasars**, PI, \$4,620 awarded, (1 *August*, 1993 - 31 *July*, 1995)
- [22] NASA Hubble Space Telescope General Observer Program, Cycle 4, **Host Galaxies and Cluster Environments of Quasars as a Function of Quasar Optical and Radio Luminosity**, PI, \$94,512 awarded, (1 *August* 1993- 31 *July* 1994)

- [23] NASA Hubble Space Telescope General Observer Program, Cycle 4, **A New Size Constraint of Lyman-alpha Clouds**, Co-I, \$77,400 awarded, (1 *August* 1993 - 31 *July* 1994)
- [24] National Science Foundation, **Quasar Research**, Co-PI, \$368,557 awarded, (15 *May* 1994 - 30 *April* 1997)
- [25] NASA Hubble Space Telescope Archive Program, Cycle 5, **Ultraviolet to Far Infrared Spectral Energy Distributions of Quasars and Active Galaxies**, co-I, \$57,700 awarded, (1 *May* 1995 - 30 *April* 1996)
- [26] NASA Hubble Space Telescope General Observer Program, Cycle 5, **Host Galaxies and Environments of BL Lac Objects**, co-I, \$4,230 awarded, (1 *December* 1995 - 30 *November* 1996)
- [27] NASA Hubble Space Telescope General Observer Program, Cycle 5, **The Relationship between Galaxies and Lyman-Alpha Absorbers at Low Redshift**, PI, \$90,631 awarded, (1 *March* 1996 - 28 *February* 1997)
- [28] NASA Hubble Space Telescope General Observer Program, Cycle 5, **The Stellar Populations of Low Surface Brightness Galaxies**, PI, \$36,838 awarded, (1 *March* 1996 - 28 *February* 1997)
- [29] NASA Hubble Space Telescope General Observer Program, Cycle 5, **Measuring the Characteristic Size of Lyman-Alpha Clouds**, co-PI, \$59,588 awarded, (1 *March* 1996 - 28 *February* 1997)
- [30] NASA Hubble Space Telescope General Observer Program, Cycle 6, **Imaging of the Gravitational Lens System 1422+231**, PI, \$39,724 awarded, (1 *October* 1996 - 30 *September* 1997)
- [31] NASA Hubble Space Telescope General Observer Program, Cycle 6, **Measuring the Characteristic Size of Lyman-Alpha Clouds**, co-PI, \$56,782 awarded, (1 *October* 1996 - 30 *September* 1997)
- [32] NASA Hubble Space Telescope Archive Program, Hubble Deep Field, **Absorption Line Probes of the Hubble Deep Field**, PI, \$71,300 awarded, (1 *June* 1996 - 31 *May* 1997)
- [33] National Science Foundation, **Low Surface Brightness Galaxies**, PI, \$152,696 awarded, (1 *June* 1997 - 31 *May* 2000)
- [34] NASA Hubble Space Telescope General Observer Program, Cycle 7, **Survey of Gravitational Lenses as Cosmological Tools**, co-PI, \$84,160 awarded, (1 *November* 1997 - 31 *October* 1999)

- [35] NASA Hubble Space Telescope General Observer Program, Cycle 7, **Survey of Gravitational Lenses as Cosmological Tools II**, co-PI, \$21,900 awarded, (1 *April* 1998 - 31 *March* 2000)
- [36] National Science Foundation, **Quasar Research**, co-PI, \$205,500 awarded, (1 *July* 1998 - 31 *July* 2002)
- [37] NASA Hubble Space Telescope Archive Program, Cycle 7, **Lyman-alpha Absorbers and Large Scale Structure**, PI, \$113,098 awarded, (1 *May* 1998 - 30 *April* 2000)
- [38] NASA Hubble Space Telescope General Observer Program, Cycle 8, **Lensed Quasar Hosts at High Redshift**, PI, \$73,620 awarded, (1 *October* 1999 - 30 *September* 2001)
- [39] NASA Hubble Space Telescope General Observer Program, Cycle 8, **The Coherence Length of Lyman-alpha Absorbers at $z = 1$** , PI, \$100,326 awarded, (1 *July* 1999 - 30 *June* 2001)
- [40] NASA Grant Supplement, HST Cycle 5 GO Program, **The Distribution and Evolution of Lyman-alpha Forest Cloud Sizes**, co-PI, \$34,365 awarded, (1 *October* 1999 - 30 *September* 2001)
- [41] NASA Long Term Space Astrophysics Program, **Quasars as Probes**, PI, \$575,954 awarded, (1 *January* 2000 - 31 *December* 2005)
- [42] NASA Hubble Space Telescope General Observer Program, Cycle 9, **The Distribution and Evolution of Lyman-Alpha Forest Cloud Sizes**, co-PI, \$42,470 awarded, (1 *April* 2001 - 31 *March* 2002)
- [43] NASA Hubble Space Telescope General Observer Program, Cycle 10, **Quasar Absorbers and Large Scale Structure**, PI, \$154,408 awarded, (1 *October* 2001 - 30 *September* 2002)
- [44] NASA Hubble Space Telescope General Observer Program, Cycle 10, **Host Galaxies of Gravitationally Lensed Quasars**, PI, \$135,776 awarded, (1 *October* 2001 - 30 *September* 2002)
- [45] NASA Hubble Space Telescope General Observer Program, Cycle 10, **HST Imaging of Gravitationally Lenses**, co-I, \$29,059 awarded, (1 *October* 2001 - 30 *September* 2002)
- [46] The Templeton Foundation, **Astrophysics Research and the Dialog Between Science and Religion**, co-PI, \$42,000 awarded, (1 *August* 2001 - 31 *August* 2002)

- [47] NASA Hubble Space Telescope General Observer Program, Cycle 11, **The Evolution of Galaxy Structure from 10,000 Galaxies with $0.1 < z < 1.2$** , co-I, \$36,088 awarded, (1 October 2002 - 30 September 2004)
- [48] NASA Hubble Space Telescope Treasury Program, Cycle 12, **The COSMOS 2-Degree ACS Survey**, co-I, \$71,083 awarded, (1 September 2003 – 31 August 2004)
- [49] NASA HST GO Program, Cycle 12, **HST Imaging of Gravitational Lenses**, co-I, \$68,592 awarded, (1 August 2003 - 31 July 2004)
- [50] NASA Hubble Space Telescope General Observer Program, Cycle 13, **Coevolution of Galaxies and Black Holes**, co-I, \$78,195 awarded, (1 July 2004 - 30 June 2005)
- [51] NASA XMM-Newton General Observer Program, Cycle 3, **Lensing Cluster in the Gravitational Lens Candidate 1435+007**, PI, \$44,000 awarded, (1 October 2004 - 30 September 2005)
- [52] Templeton Foundation, Lecture Program for the Constructive Engagement of Science and Religion, **Astrobiology and the Sacred**, PI, \$480,000 awarded, (1 May, 2004 - 30 April, 2008)
- [53] NASA Hubble Space Telescope Legacy Survey Program, Cycle 13, **HST Spectroscopy of the Low Redshift Intergalactic Medium**, PI, \$121,771 awarded, (1 November 2005 - 31 October 2007)
- [54] NASA XMM-Newton General Observer Program, Cycle 4, **Evolution of AGN in the Cosmic Web: The XMM-Newton COSMOS Survey**, co-I, \$10,320 awarded, (1 January 2006 - 31 December 2006)
- [55] NASA Spitzer Space Telescope General Observer Program, Cycle 2, **The Spitzer Deep Survey of the HST COSMOS 2-Degree Field**, co-I, \$27,719 awarded, (1 March 2006 - 30 June 2009)
- [56] NASA Spitzer Space Telescope General Observer Program, Cycle 3, **S-COSMOS: The MIPS Deep Survey of the HST COSMOS 2-Degree Field**, co-I, \$30,876 awarded, (1 August 2006 - 30 July 2009)
- [57] NASA XMM-Newton General Observer Program, Cycle 4, **Completion of the XMM-Newton COSMOS Wide-Field Survey**, co-I, \$10,000 awarded, (1 July 2008 – 30 June 2009)
- [58] NASA, **Breaking Quasar Clustering Degeneracies with AGN and Galaxies from the Multi-Wavelength COSMOS Survey**, co-I, \$33,813 awarded, (1 January 2008 – 31

December 2009)

- [59] National Science Foundation, **Probing the Limits of Nuclear Activity in COSMOS**, PI, \$269,064 awarded, (1 *July 2009* – 30 *June 2013*)