

Dean C. Hines, Ph.D.

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Primary Astronomy Research Interests

- **Extragalactic:** Active Galactic Nuclei, QSOs and QSO Host Galaxies
- **Galactic:** Formation & Evolution of Planetary Systems; Pre-Planetary Nebulae; Supernovae
- **General Astrophysics:** Astrophysical Dust
- **Instrumentation:** Optical & Infrared Spectroscopy, Imaging and (Spectro-) Polarimetry

Education

- Ph.D., Astronomy, May 1994, University of Texas at Austin
- M.Sc., Physics, December 1987, New Mexico Tech
- B.S., High Honors in Physics w/ Astrophysics, May 1985, New Mexico Tech
- High School Diploma, May 1981, Sandia Preparatory School, Albuquerque, NM

Professional Experience

Aug. 2010 – Present	Scientist Space Telescope Science Institute, Baltimore, MD	<i>JWST</i> / <i>MIRI</i> Instrument & Science Teams <i>MIRI</i> Team Lead (Oct. 2014 –)
Nov. 2003 – Present	Senior Research Scientist (Research Scientist '03 –'07) Space Science Institute Boulder, CO	Independent Research: <i>HST</i> , <i>Spitzer</i> & Ground-Based Galactic & Extragalactic Astrophysics <i>MIPS</i> Project: GTO Science Coordinator & IOC Ops Lead <i>NICMOS</i> Project: GTO Science, Polarimetry Calibration <i>FEPS Spitzer</i> & Taurus Legacy Teams
Nov. 2008 – Present	Adj. Assoc. Prof, Physics & Astronomy, UNM Albuquerque, NM	Measurement Astrophysics; serve as student –co-advisor
Jan. 1999 – Sept. 2003	Assistant Astronomer Steward Observatory, Tucson, AZ	<i>MIPS</i> Project: GTO Science Coordinator & IOC Ops Lead <i>NICMOS</i> Project: GTO Science, Instrument Calibration <i>FEPS Spitzer</i> Legacy Team: Data Reduction Lead Independent Research: <i>HST</i> & Ground-Based
Aug. 1994 – Dec. 1998	Research Associate Steward Observatory	<i>SIRTF (Spitzer)</i> Facility Science: Science Definition <i>NICMOS</i> Project: GTO Science, Instrument Calibration Independent Research: <i>HST</i> & Ground-Based
Jan. 1994 – Aug. 1996	President, Ninth Wave, Inc.	Internet Business Consulting & Design; Public Internet Education
Jan. 1995 – May 1995	Instructor Steward Observatory	Astronomy 101L7, Introductory Astronomy Lab.
Sept. 1987 – May 1994	Research & Teaching Assistant University of Texas	Introductory and Intermediate Undergraduate Astronomy
Sept. 1985 – Aug. 1987	Research & Teaching Assistant New Mexico Tech	Introductory and Intermediate Undergraduate Physics
Sept. 1981 – Dec. 1981	Lab Tech, New Mexico Tech	Assay for Copper Ore: Sample Preparation and Atomic Absorption Spectroscopy

Grant Funding & Administration, Major Project Initiatives

2014 – \$78k; D.C. Hines (PI), HST GO 13863; STScI
2013 – \$97k; D.C. Hines (PI), HST GO/DD 13199, GO 13474; STScI
2011 – \$67k; D.C. Hines (PI), HST GO 12685; STScI
2011 – ~600k; D.C. Hines, Deputy PI on EXCEDE mission funded for tech development
NASA Explorer Program
2010 – \$180k; D.C. Hines (PI), NASA ADP & PMDAP
2007 – \$181K; D.C. Hines (PI, Co-I), several programs using *HST* and *Spitzer*
2005 – 2006 – \$117K, D.C. Hines (PI) – Four large programs using *HST* and *Spitzer*
2004 – \$76, D.C. Hines (PI), several programs using *HST*
2003 – \$80K; D.C. Hines (PI), Enabling NICMOS Coronagraphic Polarimetry; NASA/STScI
2002 – \$17,676, D.C. Hines (PI), Cycle 11 NICMOS Polarimetric Calibration Contract;
NASA/STScI
2001 – \$89,000, D.C. Hines (PI), Cycle 10 GO 9057; STScI
1996-1999 – \$43,800 D.C. Hines (PI); ISO Grant for US PIs, (years 1-3); NASA/JPL
1995 – \$51,451 D.C. Hines (PI); Cycle 5 GO 5928, STScI
1994 – \$45,817 D.C. Hines (PI); Cycle 4 GO 5463, STScI

Public Outreach

Invited Panelist: STEM Career Showcase for Students with Disabilities, Oct. 2014
Co-PI: NASA/NSF, “Building Alien Earths: Reaching New Audiences with NASA Origins Science”
Science PI: NASA, MyStar – An Interactive Gaming Website for Astronomy Education
Sponsor: NASA Space Grant Student (2000 – 2001)
Spitzer FEPS Legacy Science Public Outreach Development
Consultant: IMPACTT Curriculum Development, Center for Toxicology; University of Arizona
Steward Public Lecture Series: “Near, Far, Young & Old: The Universe Unveiled by NICMOS”
Voices In Science Lecture Series, Lodestar Planetarium, Albuquerque, April 2005:
“The *Spitzer* Space Telescope and the Infrared Cosmos”
Author: “Tucson Skies,” in Wrightstown Homeowners Assoc. Quarterly (1999-2001)

Invited Talks

See Complete Bibliography

Committees & Community Service:

NSF Astronomy & Astrophysics Research Grants (AST) Review Panel Member¹ – 2014, 2015
NASA ADAP Review Panel Member – 2011
SOFIA Time Allocation Committee Panel Member – 2012, 2013
Spitzer Users Panel – 2005-2008
Spitzer Time Allocation Committee Panel Member – 2006, 2007, 2015
Spitzer Cycle-6 Exploration Science Proposal Review Panel – 2008
Chandra Time Allocation Committee Panel Member – 2006, 2011
IRTF Time Allocation Committee (non-solar science system chair 2008) – 2006-2008
NASA *Herschel* Science Center Readiness Review Board, Launch Readiness Review – 2007, 2008
Editorial Board: *Advances in Astronomy*
Referee: *A&A*, *AJ*, *ApJ*, *ApJL*, *ApJS*, *JATIS*, *MNRAS*, *PASJ*, *PASP*

Honors & Awards

2nd Lieutenant Civil Air Patrol, Promotion date = April 2015
STScI Achievement Award, 2014, for the Creation of the Russel B. Makidon Optics Laboratory
NASA Public Service Group Achievement Award, 2005, *Spitzer* MIPS Commissioning
NASA Group Achievement Award, 2004, *Spitzer* Focus Integrated Products Team (IPT)
NASA Group Achievement Award, 2004, *Spitzer* Helium Utilization IPT
NASA Group Achievement Award, 2004, *Spitzer* Payload Team
William F. Lucas/San Diego Astronomy Association, Junior Faculty Award, 1996
Astrophysics Research Center Award, 1987
National Radio Astronomy Observatory Summer Student, 1986

¹ https://www.youtube.com/watch?feature=player_embedded&v=o3mKYZo7zXs (see 3:15 in the video)
<http://naturalsciences.org/programs-events/events/stem-career-showcase/speakers>

New Mexico Tech Scholar Award, 1983
New Mexico Tech Regents Scholarship, Jan. 1982 – May, 1985
New Mexico Division of Vocational Rehabilitation Scholarship, Sept. 1981 – May 1985
Sam Stratton & Republican Scholarships, 1981
New Mexico Tech Undergraduate Honors Program, 1981
Sandia Preparatory School - High School, Student Body President, 1979 – 1980

Memberships

American Geophysical Union (AGU), 2013 – present
American Astronomical Society Division for Planetary Science (DPS), 2012 – present
American Association for the Advancement of Science (AAAS), 2007 – present
American Astronomical Society (AAS), 1986 – present
Vice President, Board of Directors, Coyote Kite Club of Tucson, 1995-1996
Central Texas Regional Director of the Texas Sky Riders, 1993-1994
National Honor Society; Quill and Scroll National Honor Society, Elected 1979

Selected Publications (of 152 Co-Authored, 18 1st Authored, Refereed Papers, h = 56; selected relevant papers & contributions below):

- “Polarimetry of Comets: Status, Questions, Future Pathways,” Hines, D.C. & Levasseur-Regourd, A.C., 2015, P&SS, submitted
- “Hubble Space Telescope Pre-Perihelion ACS/WFC Imaging Polarimetry of Comet ISON (C/2012 S1) at 3.81 AU,” Hines, D.C., Videen, G., Zubko, E. et al. 2013, ApJ, 780, L32
- “O/IR Polarimetry for the 2010 Decade (CGT): Science at the Edge, Sharp Tools for All,” Hines, D.C. et al. 2009, Astronomy, 2010 Decadal Review, 125
- “The Moth: An Unusual Circumstellar Structure Associated with HD 61005,” Hines, D.C., Schneider, Hollenbach, D. et al. 2007, ApJ, 671, L165
- “High Contrast Imaging with NICMOS - II: Coronagraphic Polarimetry,” Hines, D.C. & Schneider, G. 2007, in proceedings of the conference In the Spirit of Bernard Lyot: The Direct Detection of Planets and Circumstellar Disks in the 21st Century. June 04 - 08, 2007. University of California, Berkeley, CA, USA. Edited by Paul Kalas.
- “The Formation and Evolution of Planetary Systems (FEPS): Discovery of an Unusual Debris System Associated with HD 12039,” Hines, D.C., Backman, D.E., Bouwman, J. et al. 2006, ApJ, 638, 1070
- “Imaging of the Supernova Remnant Cassiopeia A with the Multiband Imaging Photometer for Spitzer (MIPS),” Hines, D.C., Rieke, G.H., Gordon, K.D. et al. 2004, ApJS, 154, 290
- “Polarimetry with NICMOS,” Hines, D.C. & Schneider, G. 2006, ArXiv Astrophysics e-prints, arXiv:astro-ph/0601533
- “Hubble Space Telescope Ultraviolet and Ground-based Optical Spectropolarimetry of IRAS Quasistellar Objects: Dusty Scattering in Luminous Active Galactic Nuclei,” Hines, D.C., Schmidt, G.D., Gordon, K.D. et al. 2001, ApJ, 563, 512
- “Analysis of Polarized Light with NICMOS,” Hines, D.C., Schmidt, G.D. & Schneider, G. 2000, PASP, 112, 983
- “The Polarized Spectrum of APM 08279+5255,” Hines, D.C., Schmidt, G.D., & Smith, P.S. 1999, ApJ, 514, L91
- “The Polarized Spectrum of the Fe II-rich Broad Absorption Line QSO IRAS 07598+6508,” Hines, D.C., & Wills, B.J. 1995, ApJ, 448, L69
- “The Highly Polarized Hidden Quasar IRAS 09104+4109: A Double-lobed Radio Source in a Rich Cluster,” Hines, D.C., & Wills, B.J. 1993, ApJ, 415, 82