Angelle Maria Tanner

Associate Professor Department of Physics and Astronomy Mississippi State University

Email: at876@msstate.edu

Phone: 662-325-4112 235 Hilbun Hall MSU, MS 39759

website: at876.physics.msstate.edu

Education

2004, June Ph. D. Awarded, UCLA Thesis Advisor: Dr. Andrea Ghez

Thesis Topic: Extended Sources in the Central Parsec of the Galactic Center

1998, June M.S. Astronomy, UCLA

1996, May B.S. Astronomy and Physics, University of Arizona, Honors

Employment History

2016 - present Associate Professor

Mississippi State University

2011-2016 Assistant Professor

Mississippi State University

2009-2011 Postdoctoral Scholar, RECONS member

Georgia State University

2008-2009 Research Scientist

Jet Propulsion Laboratory/ California Institute of Technology

2004-2008 Postdoctoral Scholar

California Institute of Technology

Teaching Experience

2011-present Professor

Mississippi State University

Courses: PH 1063/3063: Descriptive Astronomy/Astrophysics

PH 1031: First Year Experience X-Files: A Critical Thinking Adventure

PH 1113/2213: General Physics I (algebra)/ Physics I (calculus)

PH 4513: Optics

2010 Instructor

Evening at Emory

Course: Life in the Universe

2010 Professor

Georgia State University

Course: Astronomy 1010: Intro Astronomy and the Solar System

2003 Professor

Santa Monica Community College Course: Introductory Astronomy

1996-2002 Teaching Assistant

University of California, Los Angeles

Courses: Introductory Astronomy, Astro II: Stellar Evolution and Cosmology

1995-1996 Teaching Assistant

University of Arizona

Course: Introductory Astronomy

Honors and Awards

2013 MSU Arts and Sciences Researcher of the Month (June)

2012 Kavli Fellow, National Academy of Sciences

2009 JPL Group Award

2001-2002 UCLA Dissertation Year Fellowship

1996-2000 UC Cota Robles Fellowship

1996 UofA Astronomy Department Research Award

1995 Phi Beta Kappa, University of Arizona

1995 Barry M. Goldwater Scholarship

1995 Andrew E. Douglass Scholarship

1995 Honors Undergraduate Research Grant

1994, 1993, 1992 William F. Lucas/San Diego Astronomy Association Scholarship

1992 NASA Space Grant

Grants Awarded (as PI)

2018 NASA WIYN Telescope time (\$24K)

"Monitoring Tabby's star and M dwarfs with infrared photometry"

2014-2017 NASA ADAP (\$506K, awarded)

"Stargate: An Open Access Stellar Archive"

2013 Herschel Space Telescope Data Analysis (\$30K, awarded)

"Infrared Excesses of Young M dwarfs"

2011-2013 Kepler Participating Scientist Program (\$110K awarded)

"Testing Kepler Astrometry with our Nearest Neighbors"

2008-2009 SIM Science Study (\$75K awarded)

"Is SIM Competitive in Detecting Terrestrial Planets around Low Mass Stars?"

Telescope Proposal Awarded (as PI)

2018B KPNO WIYN 3.5 meter telescope

"Monitoring Tabby's Star with infrared photometry on short time scales"

2018A KPNO WIYN 3.5 meter telescope

"What is the degree of stellar jitter for M dwarfs in the Infrared?"

2015-2016 KPNO 2.1 meter Robo AO time as part of employment contract for Grad Advisee A. Ray

"Completing a the survey of AO observations of all stars within 25pc"

2015 Kepler K2 Campaign 4 and 5 - GO Proposal

"Using Kepler to Study M dwarf Granulation and Detect Exoplanets around our Nearest Neighbors"

2014A MMT Telescope

"Testing the IR RV Stability of the ARIES Instrument"

2013A KPNO 2.1 meter/Phoenix

"Phoenix search for planets around M dwarfs"

2012B, 2013A Palomar 200 inch Palm3000/PHARO

"Search for Low-mass companions Young M dwarfs"

2012 Herschel Space Telescope

"Infrared Excesses of Young M dwarfs"

2012B VLT/CRIRES

"Searching for Jupiter Mass Planets around our Nearest Neighbors"

2011B CHARA Telescope

"Measuring the Size of HD 69830"

2011B, 2013A SMARTS 0.9 meter Telescope

"Studying Stellar Jitter with SMARTS"

2008A, 2008B Palomar 200 inch PALAO/PHARO

"Search for Low mass companions to stars with Spitzer Excesses"

2006A Palomar 200 inch PALAO/PHARO

"Search for Low-mass companions to SIM EPIcS Targets"

2005B Palomar 200 inch PALAO/PHARO

"Search for Low-mass companions to Young Stars in Taurus"

Media Coverage

TV Appearances

2018 Mysteries of Deep Space (Discovery Channel)

"Mystery of the Alien Megastructure"

Press Interviews

2017 August WTVA/WCBI/WMSV/MPB/Newspapers - 2017 Solar Eclipse Coverage

2016 February WTVA - LIGO Gravitational Wave, Binary Black Hole Discovery

2015 August WTVA - New Horizons Pluto Encounter

Press Releases

2009 "Five Holy Grails of Exoplanet Research" - jpl.nasa.gov

2007 "SIM Can Find Spock's Home Planet" - planetquest.jpl.nasa.gov

Contributions or Features in University and Popular Magazines

2015 MSU Vision Magazine

2006 Caltech EIS Magazine

2003 Sky & Telescope Feature Article, "Journey to the Center of the Milky Way"

Radio Shows

2014-2018 Monthly Radio Story, "What's in the Sky at MSU" on WMSV

Public Lectures

2018, 2017 Golden Triangle ComicCon

2016 University of Alaska, Anchorage Planetarium Show - SciFi Exoplanets

2015 SOPOCU Jackson MS - SciFi Exoplanets

2013-2015 Deep South Star Gaze, Rainwater Observatory, French Camp, MS

2011 Atlanta Botanical Garden

2010 Dragon Con Atlanta, GA, 1st Science Talk in Star Trek Track

Telescope Shows

2016, 2015 Noxubee Wildlife Refuge, Perseid Meteor Shower telescope viewing

2013 Light Bringer Project, Discovery Day

2012-2017 May the 4th be with you, Halloween, Meteor Shower Public Nights

Service

2012-2018 Various NSF and NASA Panels (chairing a few)

2017 co-Organizer MSU Solar Eclipse Viewing (~3000 attendees)

2017-2015 Annie Jump Cannon Award Panelist (chair in 2016)

2016-2018 NOAO NASA WIYN TAC

2016 SOC - Exoclipse Meeting (August 2017)

2016-2017 Various NASA Panels including ADAP (served as chair of ADAP, 2016)

2016-2015 American Astronomical Society Annie Jump Cannon Award (served as chair, 2016)

2015 Lecturer Jackson State MAST program

2014-present ISDT Member – Thirty Meter Telescope

2013 Lecturer - Tougaloo College Summer Physics Preparation School

2013 Lecturer – Jackson State IMAGE program

2012 NASA Astrobiology Grant Program Panel

2012 SDT Member – WFIRST SDT

2010 Consultant - Chapter on detecting planets with Astrometry, Exoplanet, ed. Seager

2008 Co-Author - SIM Book - Chapter on SIM Young Star Program

2008 LOC Lead/Co-Author - NASA Exoplanet Forum Chapter on Astrometry

2008 Spinter Session Leader - Cool Stars 15, St. Andrews, Scotland

2008 NOAO Time Allocation Committee

2006 Lead Organizer - SIM EPIcS Meeting Sept 25

2006 LOC - AAS Division of Planetary Science October 9-13

2006 LOC - Cool Stars, XIV November 6-10

2006 LOC - TPF Meeting November 8-11

Refereed Publications

- ** 1st Author
- 41) "EarthFinder: A Precise Radial Velocity Probe Mission Concept For the Detection of Earth-Mass Planets Orbiting Sun-like Stars" P. Plavchan, B. Cale, P. Newman, Hamze, Natasha Latouf, W. Matzko, C. Beichman, D. Ciardi, B. Purcell, Paul Lightsey, Heather Cegla, X. Dumusque, V. Bourrier, C. Dressing, P. Gao, G. Vasisht, S. Leifer, S. Wang, J. Gagne, S. Thompson, J. Crass, A. Bechter, E. Bechter, C. Blake, S. Halverson, A. Mayo, T. Beatty, J. T. Wright, A. Wise, A. Tanner, et al. 2018, White paper National Academies Committee on Exoplanet Science Strategy (report on funded NASA study)
- 40) "A New Standard for Assessing the Performance of High Contrast Imaging Systems" Jensen-Clem, R.; Mawet, D.; Gomez Gonzalez, C. A.; Absil, O.; Belikov, R.; Currie, T.; Kenworthy, M. A.; Marois, C.; Mazoyer, J.; Ruane, G.; Tanner, A.; Cantalloube, F., 2018, AJ, 155, 19
- 39) "The First Post-Kepler Brightness Dips of KIC 8462852" Boyajian, Tabetha. S. et al. (198 authors), 2018, ApJ, 853, 8
- 38) **"Herschel Observations of Young Late-type Stars" Tanner, Angelle; Plavchan, Peter; Lowrance, Patrick; Bryden, Geoff; Henry, Todd; Riaz, Basmah; Gizis, John; Riedel, Adric; Choquet, Elodie, 2018, ApJ, submitted
- 37) "A High-precision Near-infrared Survey for Radial Velocity Variable Low-mass Stars Using CSHELL and a Methane Gas Cell" Gagné, Jonathan; Plavchan, Peter; Gao, Peter; Anglada-Escude, Guillem; Furlan, Elise; Davison, Cassy; Tanner, Angelle; Henry, Todd J.; Riedel, Adric R.; Brinkworth, Carolyn et al. 2016, ApJ, 822, 40
- 36) "Retrieval of Precise Radial Velocities from Near-Infrared High Resolution Spectra of Low Mass Stars" Gao, Peter; Plavchan, Peter; Gagné, Jonathan; Furlan, Elise; Bottom, Michael; Anglada-Escudé, Guillem; White, Russel; Davison, Cassy; Beichman, Charles; Brinkworth, Carolyn; Johnson, John; Ciardi, David; Wallace, James; Mennesson, Bertrand; von Braun, Kaspar; Vasisht, Gautam; Prato, Lisa; Kane, Stephen; Tanner, Angelle et al. 2016, PASP, 128, 968
- 35) "Thirty Meter Telescope Detailed Science Case: 2015," Skidmore, W., TMT International Science Development Teams, & Science Advisory Committee, T. 2015, Research in Astronomy and Astrophysics, 15, 1945
- 34) **"Stellar Parameters for HD 69830, a Nearby Star with Three Neptune Mass Planets and an Asteroid Belt," Tanner, A., Boyajoan, T., von Brain, K., Kane, S., Brewer, J., Farrington, C., van Belle, G., Beichman, C., Fischer, D., ten Brummelar, T., McAlister, H., Schaefer, G., 2015, ApJ, 800, 115
- 33) "A Technique to Derive Improved Proper Motions for Kepler Objects of Interest," Benedict, G. F., Tanner, A., Cargile, P., Ciardi, D. 2014, ApJ, 148, 108
- 32) "Precision near-infrared radial velocity instrumentation I: absorption gas cells" Plavchan, Peter P.; Anglada-Escude, G.; White, R.; Gao, P.; Davison, C.; Mills, S.; Beichman, C.; Brinkworth, C.; Johnson, J.; Bottom, M., Tanner, A., et al. 2013, SPIE Proceedings
- 31) "Precision near-infrared radial velocity instrumentation II: noncircular core fiber scrambler," Plavchan, Peter P.; Bottom, M.; Gao, P.; Wallace, J. K.; Mennesson, B.; Ciardi, D.; Crawford, S.; Lin, S.; Beichman, C.; Brinkworth, C., Tanner, A., 2013, SPIE Proceedings

- 30) **"NIRSPEC RV Planet Search Survey of Late-M Dwarfs", Tanner, A., White, R., Bailey, J., Blake, C., et al., 2012, ApJS, 203, 10
- 29) "Wide-Field InfraRed Survey Telescope (WFIRST) Final Report," Green, J., et al. 2012, http://adsabs.harvard.edu/abs/2012arXiv1208.4012G (White paper)
- 28) "NIRSPEC RV Planet Search Survey of Young Stars", Bailey, J., White, R., Tanner, A., et al., 2012, ApJ, 749, 16
- 27) "The Solar Neighborhood XXVIII. The Multiplicity Fraction of Nearby Stars from 5 to 70 AU and the Brown Dwarf Desert around M dwarfs," Dieterich, S., Henry, T., Golimowski, D., Krist, J., Tanner, A., 2012, AJ, 144, 64
- 26) "High Resolution Spectroscopy of HD 69830", Beichman, C., Tanner, A., et al., 2011, ApJ, 743, 85
- 25) **"Is the Intrinsic Variability of M dwarfs a Barrier to Detecting Earth-mass Planets?" Tanner, A., 2010, Proceedings of Cool Stars 16, Seattle WA, Aug 28-Sept 2
- 24) "HST and Spitzer Observations of the HD 207129 Debris Ring", Krist, J., Stapelfeldt, K., Bryden, G., Rieke, G., Su, K., Chen, C., Beichman, C., Hines, D., Rebull, L., Tanner, A., et al. 2010, AJ, 140, 1051
- 23) **"A High Contrast Imaging Survey of SIM Lite Planet Search Targets", Tanner, A., Law, N., Gelino, C., 2010, PASP, 122, 1195
- 22) "Accurate Coordinate and 2MASS Cross Identifications for (Almost) all Gliese Catalog Stars", Stauffer, J., Tanner, A., et al., PASP, 2010, 122, 885
- 21) "Planets & Debris Disks: Results from a Spitzer/MIPS Search for IR Excess", Bryden, G., Tanner, A., et al., 2009, ApJ, 705, 1226
- 20) "Explorations Beyond the Snow Line: Spitzer/IRS Spectra of Debris Disks Around Solar-Type Stars", Lawler, S., Beichman, C., Bryden, G., Tanner, A., et al., 2009, ApJ, 705, 89
- 19)**"160 micron Survey for Debris Disks with Spitzer", Tanner, A., Beichman, C., Bryden, G., Lawler, S., et al. 2009, ApJ, 704, 109
- 18) "Taking the Measure of the Universe: Precision Astrometry with SIM PlanetQuest", Unwin, S., Shao, M., Tanner, A., et al. 2008, PASP, 863, 38
- 17) **"SIM PlanetQuest Key Project Precursor Observations to Detect Gas Giant Planets Around Young Stars," Tanner, A., Beichman, C., 2007, ApJ, 119, 747
- 16) "Pinwheels in the Quintuplet Cluster," Tuthill, P., Monnier, J., Tanner, A., et al. 2006, Science, 313, 935
- 15) "IRS Spectra of Solar-Type Stars: A Search for Astroid Belt Analogs," Beichman, C., Tanner, A., ApJ, 2006, 639, 1166
- 14) "Astrometric Detection of Terrestrial Planets in the Habitable Zones of Nearby Stars with SIM PlanetQuest," Catanzarite, J., Shao, M., Tanner, A., Unwin, S., & Yu, J. 2006, PASP, 118, 1322

- 13) "High Spectral Resolution Observations of the Massive Stars in the Galactic Center," Tanner, A., D. Figer, et al. 2006, ApJ, 641, 891
- 12) **"Stellar Bowshocks in the Northern Arm of the Galactic Center: More Members and Kinematics of the Massive Star Population," A.Tanner, A. Ghez, M. Morris, J. Christou, ApJ, 2005, 624, 742
- 11) "Newly Resolved Bow Shocks within the Central Parsec," Tanner, A., Ghez, A., Morris, M., Becklin, E., 2003, Astron. Nachr., Vol., 324, 597
- 10) **"Journey to the Galactic Center," Tanner, A., 2003, Sky and Telescope, April issue
- 9) **"Spatially Resolved Observations of the Galactic Center Source, IRS 21," Tanner, A., Ghez, A., Morris, M., Becklin, E., Cotera, A., Ressler, M., Werner, M., Wizinowich, P. 2002, ApJ, 575, 860
- 8) "Near-Infrared Variability of Sgr A*," Hornstein, S., Ghez, A., Tanner, A., Morris, M., Becklin, E., 2002, ApJ, 577, L9
- 7) "The First Measurement of Spectral Lines in a Short-Period Star Bound to the Galaxy's Central Black Hole: A Paradox of Youth," Ghez, A. M., Duchene, G., Matthews, K., Hornstein, S., Tanner, A., et al. 2003, ApJL, 586, 127
- 6) "The Accelerations of Stars orbiting the Milky Way's Central Black Hole," Ghez, A,M, Morris, M, Becklin, E,E, Tanner, A., Kremenek, T, 2000, Nature, 407, 349
- 5)**"Is the Galactic Center Source, IRS 21, as Large as It Appears?" Tanner, A., Ghez, A., Morris, M., Becklin, E.E., Cotera, A., Ressler, M., 2000, SPIE Conf. Proceeding, 4005, 180
- 4)**"Spatially Resolved Dust Shells in the Central Parsec," Tanner, A., Ghez, A.M., Morris, M., in The Central Parsecs, Galactic Center Workshop 1998, Tucson, . 7-11, 1998, Eds. H. Falcke, A. Cotera, W. Huschl, F. Melia, and M. Rieke
- 3) "Towards Complete Stellar Orbits around the Galaxy's Central Black Hole: The First Acceleration Measurements," A. M. Ghez, T. Kremenek, A. Tanner, M. Morris, and E. Becklin, 1998, ESO Proceedings of "Black Holes in Binaries and Galactic Nuclei"
- 2) "Mid-Infrared Imaging of the Central Parsec with Keck," Cotera, A.; Morris, M.; Ghez, A. Becklin, E. E.; Tanner, A. M.; Werner, M. W.; Stolovy, S. R.in The Central Parsecs, Galactic Center Workshop 1998, Tucson, Sep. 7-11, 1998, Eds. H. Falcke, A. Cotera, W. Huschl, F. Melia, and M. Rieke; the ASP Conf. Ser.
- 1) **"The Study of Quasar Absorption Line Systems with IRAS," Tanner, A., Bechtold, J., Cutri, R.M., Walker, C.E., Black, J., 1996, AJ, 112, 62

Colloquia

October 2, 2002	University of Calif, Long Beach	Resolving the Enigmatic Northern Arm Sources in the Central Parsec
April 14, 2009	Carnegie Institution	Toward Alien Horizons: The Study of Exoplanet Atmospheres through Transit Spectroscopy
October 6, 2011	University of Georgia	M Dwarf Variability: A Barrier to Detecting Rocky Planets?
February 28, 2012	University of Mississippi	Exoplanets and the Search for Another Earth
March 7, 2012	University of Alabama	Exoplanets and the Search for Another Earth
March 12, 2013	Lowell Observatory	M Dwarf Variability: A Barrier to Detecting Rocky Planets?
September 11, 2014	Clemson University	The search for Earth 2.0: What will the host stars let us find?
April 21, 2016	University of Oklahoma	Red Dwarf: The Search for Planets around M stars

Invited Talks

January 1, 1994	NASA Space Grant Symposium	IRAS Survey of QSOs
April 1, 1995	Steward Observatory Symposium, UA	Something about White Dwarfs
October 13, 2001	Keck Sceince Meeting, Caltech	Mysterious Resolved Sources at the Galactic Cente
February 27, 2006	Astronomy Tea, Caltech	Detection of debris disk systems with Spitzer
March 3, 2006	University of California, Berkrley	Spitzer Disks
September 10, 2006	LSU	Spitzer Disks
November 5, 2007	CfA	Are M dwarfs good targets for planet searches and do we care?
November 7, 2007	Wesleyan University	Are M dwarfs good targets for planet searches and do we care?
November 9, 2007	AMNH	Are M dwarfs good targets for planet searches and do we care?
March 10, 2008	MPIA	Transits from Space with Spitzer and HST
November 10, 2008	Science Science Study Workshop	Detecting Terrestrial Mass Planets Around M-dwarfs: Is SIM Competitive?
February 4, 2010	Goddard Space Flight Center	Planet Searches with Infrared Radial Velocities: Young and Low-mass Stars
April 9, 2010	University of Texas, Austin	Overview of High Angular Resolution Imaging
February 21, 2011	University of Florida	M Dwarf Variability: A Barrier to Detecting Rocky Planets?
June 8, 2011	Space Telescope Science Institute	Transits from Space with Spitzer and HST
September 17, 2011	SONG conference, College of Charleston	Extrasolar Planet Transits and SONG
October 19, 2012	Vanderbilt University	Finding Planets Around Our Nearest Neighbors
March 14, 2013	Arizona State University	M Dwarf Variability: A Barrier to Detecting Rocky Planets?
March 16, 2013	University of Arizona	M Dwarf Variability: A Barrier to Detecting Rocky Planets?
January 29, 2016	University of Alaska, Anchorage	The Search for Spock's Home Planet (planetarium show)
March 9, 2016	Mississippi University for Women	The search for Earth 2.0

Contributed Talks

April 19, 2001	Integrating Research and Education, Keauhou HI	Journey to the Center of the Galaxy
November 8, 2001	The Central 300 Paresecs, Kona HI	Resolving the Enigmatic Northern Arm Sources in the Central Parsec
January 1, 2002	SPIE Conference, Munich Germany	IRS 21
January 6, 2003	AAS 201, Seattle WA	Resolving the Enigmatic Northern Arm Sources in the Central Parsec
October 4, 2006	IPAC Science Symposium, Pasadena CA	Companion Search Around SIM EPIcS and YSO Targets with Palomar AO+Coronagraph Observations
June 6, 2007	In the Spirit of Lyot I, University of Calif, Berkrley	Companion survey of SIM PlanetQuest targets
October 13, 2007	IPAC Science Symposium, Pasadena CA	Spitzer 160 micron Observations of Nearby Stars
July 24, 2008	Cool Stars 15, University of St Andrews Scotland	Detecting Planets Around Low Mass Stars: The Gateway to Terrestrial Planets (Splinter Host)
October 1, 2009	Palomar Science Meeting, Pasadena CA	A Palomar AO Survey for Sub-Stellar Companions to Stars with Spitzer Excesses
August 16, 2010	Exoplanets with Precise RVs, Penn State University	NIRSPEC RV Measurements of Late M-Dwarfs
September 1, 2010	Cool Stars 16, University of Washington	M-Dwarf variability: A barrier for rocky planets?
October 26, 2010	In the Spirit of Lyot II, Paris France	IMAGES: An Image Archive Generate for Exoplanet Surveys
March 9, 2015	Tools for Astronomical Big Data, Tucson AZ	The Starchive
March 11, 2015	Tools for Astronomical Big Data, Tucson AZ	The Starchive

Public Talks

February 1, 2001	Santa Monica Community College	Journey to the Center of the Galaxy
March 1, 2001	Cal State University Northridge	Journey to the Center of the Galaxy
August 10, 2007	Star Trek Convention, Las Vegas Hilton Hotel	STRANGE NEW WORLDS: NASA'S SEARCH FOR VULCAN AND OTHER TREK PLANETS
September 6, 2010	DragonCon 2010, Atlanta GA	Kepler Telescope: Searching for a 2nd Earth
November 10, 2010	Emory Univerity, Atlanta GA	Planets of very low-mass stars and brown dwarfs
May 12, 2012	Atlanta Botanical Garden	Pandora Botanicals: What Kind of Plants Might Grow on Other Planets?
April 12, 2013	Rainwater Observatory	Looking for Planets Around Our Nearest Neighbors
March 28, 2014	Rainwater Observatory	Planets Around Famous stars of SciFi
June 21, 2014	Jackson Convention Center	Sci Fi Stars
April 13, 2015	StarGaze Rainwater Observatory	Plants Around Extrasolar Planets
April 13, 2016	StarGaze Rainwater Observatory	The search for Earth 2.0

Poster Presentations

Spatially Resolved Dust Shells in the Central Parsec

November 7, 1998

The Central Parsecs, Galactic Center Workshop, Kona HI

April 19, 2001	Inegrating Research and Education, Keauhou HI	Gemini AO Images of the Mysterious Extended Sources at the Galactic Center
March 1, 2004	Search for Life Beyond the Solar System, Tucson AZ	IMAGES: An IMage Archive Generated for Exoplanet Surveys
September 1, 2006	DPS 38 Meeting, Pasadena CA	M Dwarfs as Desirable Targets for Planet Search Surveys
January 1, 2007	AAS 209, Seattle WA	Finding Terrestrial Planets in the HZ of Nearby Stars with SIM PlanetQuest
June 27, 2007	Extreme Solar Systems, Santorini Greece	Finding Planets Around M Dwarfs from Space
January 1, 2008	AAS 211, Austin TX	Spitzer Survey of Nearby Debris Disks at 160 Microns
May 20, 2008	Transitins Planets, IAU Symposium, Harvard University	Emission Spectroscopy of HD 209458 with Spitzer
January 1, 2010	AAS 215, Washington DC	The Final Report: Detecting Terrestrial Mass Planets Around M-dwarfs: Is SIM's performance competitive?
May 1, 2011	AAS 218, Boston MA	Getting to Know our Nearest Couples: CTIOPI Astrometry of Nearby Low-Mass Binaries
July 27, 2011	Sagan Exoplanet Workshop, Microlensing	WFIRST: Additional Planet Finding Capablities
November 3, 2012	24th Kavli Fronteirs of Science Symposium	Planets around M dwarfs
January 7, 2013	221st AAS Meeting, Long Beach CA	Kepler Astrometry: A Modern Art
November 6, 2013	Kepler Conference II, AMES CA	Kepler Astrometry: An Attempt
January 7, 2014	223rd AAS Meeting, Washington DC	Stellar Parameters for HD 69830, a Nearby Star with Three Neptune Mass Planets and an Asteroid Belt
March 18, 2014	Search for Life Beyond the Solar System, Tucson AZ	IMAGES or Stargate: Open Access Catalogs of Nearby Stars
June 10, 2014	Cool Stars 18m Flagstaff AZ	RV measurements with Phoenix on the 1.2 meter KPNO telescope
June 10, 2014	Cool Stars 18, Flagstaff AZ	Stargate Archive
July 18, 2014	TMT in the Astronomical Landscape of the 2020s, Tucson AZ	TMT and Exoplanet Radial Velocity Surveys
January 4, 2015	225th AAS Meeting, Seattle WA	The Starchive
May 11, 2015	IAU 314: Young Stars & Planets Near the Sun, Atlanta GA	The Starchive
May 19, 2015	Landolt Standards and 21st Century Astronomy, LSU	The Starchive
June 22, 2015	In the Spirit of Lyot 2015, Montreal CA	The Starchive
July 5, 2015	The 2nd Workshop: Extreme Precision RVs, Yale	The Starchive
December 4, 2015	Extreme Solar Systems III, Kona HI	The Starchive