

MICHAEL C. LIU

Institute for Astronomy
2680 Woodlawn Drive
University of Hawai'i
Honolulu, HI 96822

Phone: (808) 956-6666
Fax: (808) 956-9580
Email: mliu@ifa.hawaii.edu
<http://www.ifa.hawaii.edu/~mliu>

Education

University of California, Berkeley	Ph.D. Physics, 2000 (advisor: James R. Graham)
University of California, Berkeley	M.A. Physics, 1993
Cornell University	B.A. Physics, <i>summa cum laude</i> , 1992

Research Interests

Extrasolar planets and brown dwarfs
Star and planet formation
Adaptive optics
Infrared astronomy and instrumentation
All-sky surveys

Employment History

Astronomer/Professor (tenured), Institute for Astronomy, University of Hawai'i, 2011–present
Associate Astronomer/Professor (tenured), Institute for Astronomy, University of Hawai'i, 2007–2011
Assistant Astronomer/Professor (tenure-track), Institute for Astronomy, University of Hawai'i, 2003–2007
Hubble Postdoctoral Fellow, Institute for Astronomy, University of Hawai'i, 2003
Beatrice Watson Parrent Fellow, Institute for Astronomy, University of Hawai'i, 2000–2003
Research Assistant, Department of Astronomy, UC Berkeley, 1993–2000

Honors and Awards

Director's Faculty Excellence Award, Institute for Astronomy, University of Hawaii, 2016
Regents' Medal for Excellence in Research, University of Hawaii, 2007
Alfred P. Sloan Research Fellow, 2005–2007
Invited plenary lecture, American Astronomical Society, 2004
("Formation and Early Evolution of Substellar Objects")
Hubble Postdoctoral Fellowship, 2003
Beatrice Watson Parrent Fellow, Institute for Astronomy, Univ. of Hawai'i, 2000–2003
Uhl Prize for Excellence in Dissertation Research, Dept of Astronomy, UC Berkeley, 1999
National Science Foundation Graduate Fellowship, 1992–1995
Kieval Prize (top graduating physics undergraduate), Cornell University, 1992
Dr. Robert H. Goddard Scholarship, National Space Club, 1992
Merrill Presidential Scholar, Cornell University Class of 1992

International Science Campaign Leadership

Canada-France-Hawaii Telescope IR Parallax Large Program (300 hrs), PI, 2016–2019

Gemini-South NICI Planet-Finding Campaign (500 hrs), PI, 2006–2013

Pan-STARRS 1 Key Project on the Solar Neighborhood, science co-lead, 2006–2016

Major Research Grants (as PI, or co-I with major funding)

- 2020– "Advancing Exoplanets Research through Keck All-Sky Precision AO.", GBMF (PI), \$730K
 2018– "Astrophysics Enabled by Keck All-Sky Precision AO", NSF MSIP (co-PI), \$7049K
 2015– "Physical Properties of the Coolest Brown Dwarfs", NSF (PI), \$470K
 2013–2018 "An Astrometric Census of the Solar Neighborhood with Pan-STARRS1", NSF (co-I), \$512K
 2011–2015 "Studying Gas-Giant Planets Directly", NASA Origins (PI), \$380K
 2011–2015 "Bridging the Brown Dwarf/Jupiter Gap with a Cold Brown Dwarf", HST Cycle 19 (PI), \$100K
 2011–2014 "PSF Determination for [Keck] Adaptive Optics", NSF ATI (co-I), \$100K
 2009–2014 "Ultracool Astrophysics with Brown Dwarf Binaries", NSF (PI), \$540K
 2008–2014 "Dynamical Masses for the Coldest Brown Dwarfs," HST Cycle 17+18+19 (PI), \$110K
 2007–2011 "The Pan-STARRS Brown Dwarf Factory," NSF (co-I), \$440K
 2007–2012 "The Gemini NICI Planet-Finding Campaign," NSF (PI), \$500K
 2007–2011 "Resolving Ultracool Astrophysics with Brown Dwarf Binaries," HST Cycle 16 (PI), \$130K
 2007–2008 "SGER: Starting the NICI Planet-Finding Campaign," NSF (PI), \$120K
 2005–2010 "Formation and Physical Properties of Substellar Objects," NSF (PI), \$371K
 2005–2008 "A Search for Debris Disks in the β Pictoris Moving Group," HST Cycle 14 (co-I), \$118K
 2004–2009 "New Windows Into the Substellar Mass Function," NSF (PI), \$265K

Other Research Grants

- 2019– "Sub-Jupiters around Young Brown Dwarfs," HST Cycle 26 (co-I)
 2017– "The Coolest Sample of Brown Dwarf Dynamical Masses," HST Cycles 25–27 (co-I)
 2016– "Characterizing Weather on a Young Free-Floating Planet," HST Cycle 23 (co-I)
 2014– "Dynamical Masses for Free-Floating Planetary-Mass Binaries," HST Cycles 22–24 (co-I)
 2013–2018 "Wide-Field Ground-Layer Adaptive Optics Demonstrator," NSF ATI (co-I)
 2012–2016 "PSF Determination: Unlocking the Full Scientific Value of Adaptive Optics", NSF ATI (co-I)
 2012–2016 "Very Low-Mass Pleiades Binaries," HST Cycle 19 (co-I)
 2011–2013 "A Disk Census for New Low-Mass Members of TWA," Herschel Cycle 1 (co-I)
 2011–2014 "Probing Ultracool Atmospheres & Interiors with Dynamical Masses," HST Cycle 19 (co-I)
 2010–2013 "Development of a Next Generation Laser System for Keck II LGS," NSF MRI-R2 (co-I)
 2010–2013 "Development of an Improved Keck II Laser Launch Facility", NSF MRI (co-I)
 2010–2011 "Binary Brown Dwarfs and the L/T Transition," HST Cycle 17 (co-I)
 2009–2010 "Deep IRAC/MIPS Photometry of Young Planetary-Mass Objects," Spitzer Cycle 5 (co-I)
 2009–2010 "Chilly Pairs: A Search for the Latest T Dwarfs," HST Cycle 17(co-I)
 2009–2010 "Precision Tests of Ultracool Dwarf Atmospheric Models," Spitzer Cycle 5 (co-I)
 2008–2011 "Debris Disks around Young M Dwarfs," Spitzer Cycle 5 (PI)
 2007–2008 "Identifying the Missing Young Low-Mass Stars," Galex Cycle 3 (co-I)
 2007–2010 "Wide-Field, Low-Mass Census of the Nearest Star-Forming Region," Spitzer Cycle 4 (PI)
 1997–2003 and 8 other grants as co-I while postdoc and graduate student (NSF, STScI, Chandra)

Professional Service

Advisory

AURA, University of Hawaii Member Representative, 2020–present
Keck Observatory, Science Steering Committee, 2006–present
Keck Observatory, Time Domain Astronomy working group, 2017–2018
Keck Observatory, Strategic Retreat, adaptive optics co-lead, 2014
National Optical Astronomy Observatory, System Roadmap Committee, 2011–2012
University of Hawaii, Institute for Astronomy Director Search Advisory Committee, 2010
Gemini Observatory, US Science Advisory Committee, 2006–2011
Gemini Observatory, Gemini Science Committee, 2006
ASIAA, optical/IR review panel, Taiwan, 2006

Peer-Review

NSF Division of Astronomical Sciences, review panel 2020
NSF Division of Astronomical Sciences, review panel 2019
Hubble Space Telescope, Cycle 20 review panel, 2012
Keck Observatory, Next Generation Adaptive Optics system, Build-to-Cost review, 2009
Keck Observatory, Keck I Laser Guide Star review panel, 2008
Hubble Space Telescope, Cycle 16 review panel, 2007
NASA Keck Time Allocation Committee, 2006–2007
Spitzer Space Telescope Cycle 1 science review panel, 2004
NASA Origins panel, 2003
External reviewer for NSF, NASA, PPARC, and European Research Council

Instrumental

Keck Observatory, Adaptive Optics Future Study Group, 2019–present
U.S. Extremely Large Telescope Program, Key Science Program development, 2018–2019
Thirty-Meter Telescope, Planet-Finder Instrument, 2nd gen instrument study group, 2015–present
Keck Observatory, Keck All-Sky Precision Adaptive Optics (KAPA), science team, 2015–present
Thirty-Meter Telescope, Exoplanet International Science Development Team, 2014–present
LSST Science Collaboration on Stars, the Milky Way and the Local Volume, 2012–present
Thirty-Meter Telescope, IRIS (InfraRed Imaging Spectrograph), science team, 2010–present
Keck Observatory, Next-Generation AO Build-to-Cost review, 2009
AURA Giant Segmented Mirror Telescope, Science Working Group, 2005–2007
Keck Observatory, Adaptive Optics Working Group, 2002–2005; Co-Chair 2005–2009
Keck Observatory, Next-Generation AO science case, Co-Chair, 2006
Gemini Observatory Precision Radial Velocity Spectrograph, IfA/UK ATC Science Team, 2005–2008
Gemini High-Resolution Near-IR Spectrograph, IfA/UK ATC Science Design Team, 2004–2005
Gemini Extreme Adaptive Optics Coronagraph, Arizona/NOAO/Oxford/IfA Science Design Team, 2004
Keck OSIRIS (OH-Suppressing Infra-Red Imaging Spectrograph) pre-ship review panel, 2004
Gemini-South Near-IR Coronagraphic Imager (NICI) Science Definition Team, 2002 — 2008

University

Participant of nearly all (and chair of most) IfA/Hawaii faculty committees (list here),
as well as key member of several ad hoc committees on strategic planning, time allocation, and policy

Advising Experience

Postdoc advisor, IfA/Hawaii

Mark Phillips (2021–present)
Janis Hagelberg (Swiss SNF Fellow; 2014–2016; now postdoc at LAOG, University of Grenoble)
Jessica Lu (NSF Fellow; 2011–2013; now asst professor at UC Berkeley)
Eric Nielsen (2011–2014; now asst professor at New Mexico State University)
Adam Kraus (Hubble Fellow, 2009–2012; now asst professor at University of Texas, Austin)
Niall Deacon (2009–2011; now postdoc at Max Planck Institute for Astronomy)
Lucas Cieza (Spitzer Fellow, 2007–2010; now asst professor at Universidad Diego Portales)
John Johnson (NSF Fellow, 2007–2009; now professor at Harvard)
Beth Biller (Hubble Fellow, 2007–2010; now Chancellor’s Fellow at University of Edinburgh)
Evgenya Shkolnik (NRC Fellow, 2006–2008; now assoc professor at Arizona State University)
Zahed Wahhaj (2006–2012; now tenured astronomer at European Southern Observatory)
Katelyn Allers (2006–2009; now prof at Bucknell University)

PhD+Master’s thesis advisor, IfA/Hawaii

Maissa Salama (2016–2021)
postdoc at UCSC with Rebecca Jensen-Clem
Zhoujian Zhang (2015–2021)
postdoc at UT Austin with Adam Kraus
William Best (2011–present)
postdoc at UT Austin with Adam Kraus
Kimberly Aller (2010–2016)
Insight Data Science Fellow; now data scientist at Tala
Brendan Bowler (2008–2013)
ASP Trumpler Prize, Exoplanet Prize Fellow at Caltech; now asst prof at UT Austin
Trent Dupuy (2005–2010)
Hubble Fellow at Harvard/CfA; now assoc professor at University of Edinburgh

Master’s thesis advisor, IfA/Hawaii

Ruihan (Suzanne) Zhang (2021–present)
Michael Kotson (2012–2013)
Geoff Mathews (2007–2008)
Mark Pitts (2004–2005)
Mark Willman (2003–2004)

Supervised post-graduate research, IfA/Hawaii

Eugenio Rivera (Fisk/Vanderbilt, 2011–2012)
William Best (Haverford College/Punahou School, 2010)
Brandon Swift (UC Berkeley, 2005–2006)
Jonathan Leong (Caltech, 2001–2002)

Undergraduate mentor for NSF REU program, IfA/Hawai‘i

Spencer Hurt (U. Colorado, 2021)
Stuart Gegenheimer (UC Berkeley, 2012)
James Wray (Princeton; 2005)
Meghan McGarry (UC Berkeley; 2001)

Supervised undergraduate research at UC Berkeley

Genevieve Graves (Harvard, 2000)
Kevin Bundy (UC Berkeley, 1999)
Melissa Enoch (UC Berkeley, 1999)

A. Refereed Publications

188 total (23 first author, 63 second author), H index = 63

- A189. “Improved Dynamical Masses for Six Brown Dwarf Companions Using Hipparcos and Gaia EDR3.” Brandt, G., Dupuy, T., Li, Y., Chen, M., Brandt, T. et al. (13 total authors), *ApJ*, in press (accepted 09/14/21)
- A188. “Detection and Bulk Properties of the HR 8799 Planets with High-Resolution Spectroscopy.” Wang, J., Ruffio, J.-B., et al. (51 total authors), *ApJ*, in press (accepted 07/12/21)
- A187. “The Second Discovery from the COol Companions ON Ultrawide orbiTS (COCONUTS) Program: A Cold Wide-Orbit Exoplanet around a Young Field M Dwarf at 10.9 pc.” Zhang, Z., Liu, M., Claytor, Z., Best, W., Dupuy, T. & Siverd, R. 2021, *ApJL*, in press (accepted 07/04/21)
- A186. “Large Adaptive Optics Survey for Substellar Objects (LASSO) Around Young, Nearby, Low-mass Stars with Robo-AO.” Salama, M., Ou, J., Baranec, C., Liu, M. et al. (18 total authors), *AJ*, in press (accepted May 19, 2021)
- A185. “A Novel Survey for Young Substellar Objects with the W-band Filter. III: Searching for Very Low Mass Brown Dwarfs in Serpens South and Serpens Core.” Dubber, S., Biller, B. et al., *MNRAS*, in press (accepted 05/07/21)
- A184. “Uniform Forward-Modeling Analysis of Ultracool Dwarfs. II. Atmospheric Properties of 55 Late-T Dwarfs.” Zhang, Z., Liu, M., Marley, M., Line, M. & Best, W., *ApJ*, in press (accepted 05/07/21)
- A183. “Uniform Forward-Modeling Analysis of Ultracool Dwarfs. I. Methodology and Benchmarking.” Zhang, Z., Liu, M., Marley, M., Line, M. & Best, W., *ApJ*, in press (accepted 04/14/21)
- A182. “Hawaii Infrared Parallax Program. V. New T-Dwarf Members and Candidate Members of Nearby Young Moving Groups.” Zhang, Z., Liu, M., Best, W., Dupuy, T. & Siverd, R., *ApJ*, 911, 7
- A181. “Individual Dynamical Masses of DENIS J063001.4–184014AB Reveal A Likely Young Brown Dwarf Triple.” Sahlmann, J., Dupuy, T., Burgasser, A., Filippazzo, J., Martin, E., Bardalez Gagliuffi, D., Hsu, C.-C., Lazorenko, P., & Liu, M. 2021, *MNRAS*, 500, 5453
- A180. “A Volume-Limited Sample of Ultracool Dwarfs. I. Construction, Space Densities, and a Gap in the L/T Transition.” Best, W., Liu, M., Magnier, E. & Dupuy, T. 2021, *AJ*, 161, 42
- A179. “A Wide Planetary-Mass Companion to a Young Low-Mass Brown Dwarf in Ophiuchus.” Fontanive, C., Allers, K., Pantoja, B, et al. (9 total authors) 2020, *ApJL*, 905, 14 (accepted 11/17/20)
- A178. “Early High-Contrast Imaging Results with Keck/NIRC2-PWFS: The SR 21 Disk.” Uyama, T. et al. (26 total authors) 2020, *ApJ*, 160, 283

- A177. “Direct Radio Discovery of a Cold Brown Dwarf.” Vedantham, H., Callingham, J., Shimwell, T., Dupuy, T., Best, W., Liu, M. et al. (12 total authors) 2020, ApJL, 903, 33
- A176. “A Novel Survey for Young Substellar Objects with the *W*-band Filter. I. Filter Design and New Discoveries in Ophiuchus and Perseus.” Allers, K. & Liu, M. 2020, PASP, 132, 4401
- A175. “Spitzer Variability Properties of Young Giant Planet Analogs.” Vos, J., Biller, B., Allers, K., Faherty, J., Liu, M. et al. (19 total authors) 2020, AJ, 160, 38
- A174. “ACRONYM IV: Three New, Young, Low-mass Spectroscopic Binaries.” Flagg, L., Shkolnik, E., Weinberger, A., Bowler, B., Skiff, B., Kraus, A. and Liu M. 2020, AJ, 896, 153
- A173. “Keck/NIRC2 L'-Band Imaging of Jovian-Mass Accreting Protoplanets around PDS 70.” Wang, J., Ginzberg, S., Ren, B., Wallack, N., Gao, P. et al. (35 total authors) 2020, ApJ, 159, 263
- A172. “2MASS J0443+3723 B: A Young Companion at the Substellar Boundary with Potential Membership in the β Pictoris Moving Group.” Phillips, C., Bowler, B., Mace, G., Liu, M., & Sokol, K. 2020, ApJ, 896, 173
- A171 “The Hawaii Infrared Parallax Program. IV. A Comprehensive Parallax Survey of L0–T8 dwarfs with UKIRT.” Best, W., Liu, M., Magnier, E., & Dupuy, T. 2020, ApJ, 159, 257
- A170 “COol Companions ON Ultrawide orbiTS (COCONUTS). I. A High-Gravity T4 Benchmark around an Old White Dwarf and A Re-Examination of the Surface-Gravity Dependence of the L/T Transition.” Zhang, Z., Liu, M., Hermes, J. Magnier, E., Marley, M. et al. 2020, ApJ, 891,171
- A169. “A Novel Survey for Young Substellar Objects with the W-band Filter. II. The Coolest and Lowest Mass Members of the Serpens-South Star-forming Region.” Jose, J., Biller, B., Albert, L., Dubber, S., Allers, K., Herczeg, G., Liu, M. et al. 2020 (15 total authors) 2020, ApJ, 892, 122
- A168. “WISE J072003.20–084651.2B Is A Massive T Dwarf.” Dupuy, T., Liu, M., Best, W., Mann, A. et al. (24 total authors) 2019, ApJ, 158, 174
- A167. “3.8 μ m Imaging of 400–600 K Brown Dwarfs and Orbital Constraints for WISEP J0458+64AB.” Leggett, S., Dupuy, T., Morley, C., Marley, M., Best, W., Liu, M. et al. (14 total authors), ApJ, 882, 117
- A166. “ACRONYM. III. Radial Velocities for 336 Candidate Young Low-Mass Stars in the Solar Neighborhood, Including 78 Newly Confirmed Young Moving Group Members.” Schneider, A., Shkolnik, E., Allers, K., Kraus, A., Liu, M., Weinberger, A. & Flagg, L, AJ, 157, 234
- A165. “The Elusive Majority of Young Moving Groups. I. One Hundred New Low-Mass Candidates of Nearby Kinematic Associations.” Bowler, B., Hinkley, S., Ziegler, C., Baranec, C. et al. (10 total authors), ApJ, in press (accepted 03/19)

- A164. “A Search for Variability in Exoplanet Analogues and Low-Gravity Brown Dwarfs.” Vos, J., Biller, B. Bonavita, M., Eriksson, S., Liu, M. et al. (21 total authors) 2019, MNRAS, 483, 480
- A163. “The Hawaii Infrared Parallax Program. III. 2MASS J0249–0557 c: A Wide Planetary-Mass Companion to a Low-Mass Binary in the β Pic Moving Group.” Dupuy, T., Liu, M., Allers, K., Biller, B. Kratter, K. et al. (9 total authors) 2018, ApJ, 156, 57
- A162. “The Pan-STARRS1 Proper-Motion Survey for Young Brown Dwarfs in Nearby Star-Forming Regions. I. Taurus Discoveries and A Reddening-Free Classification Method for Ultracool Dwarfs.” Zhang, Z., Liu, M., Best, W., Magnier, E., Aller, K. et al. (14 total authors) 2018, ApJ, 858, 41
- A161. “Simultaneous, Multi-Wavelength Variability Characterization of the Free-Floating Planetary-Mass Object PSO J318.5–22.” Biller, B., Vos, J. et al. (18 total authors) 2018, AJ, 155, 95
- A160. “Investigating the Variability of the Lowest-Mass Objects in the AB Doradus Moving Group.” Vos, J., Allers, K., Biller, B., Liu, M., Dupuy, T., Gallimore, J. & Adenuga, D. 2018, MNRAS, 474, 1041
- A159. “Cloudless Atmospheres for Young Low-Gravity Substellar Objects.” Tremblin, P., Chabrier, G., Baraffe, I., Liu, M. et al. (10 total authors) 2017, ApJ, 850, 46
- A158. “Photometry and Proper Motions of M, L, and T Dwarfs from the Pan-STARRS1 3π Survey.” Best, W. M. J., Magnier, E., Liu, M., Aller, K. A., et al. (15 total authors) 2018, ApJS, 234, 1
- A157. “The UKIRT Hemisphere Survey: Definition and Full J -Band Data Release.” Dye, S., Lawrence, A. et al. (25 total authors) 2018, MNRAS, 473, 5113
- A156. “The Young Substellar Companion ROXs 12 B: Near-Infrared Spectrum, System Architecture, and Spin-Orbit Misalignment.” Bowler, B., Kraus, A., Bryan, M., Knutson, H. et al. (10 total authors) 2017, AJ, 154, 165
- A155. “The Multiplicity of M Dwarfs in Young Moving Groups.” Shan, Y., Yee, J., Bowler, B. et al. (14 total authors) 2017, ApJ, 846, 93
- A154. “The Young L Dwarf 2MASS J11193254–1137466 is a Planetary-Mass Binary.” Best, W., Liu, M., Dupuy, T. & Magnier, E. 2017, ApJL, 843, 4
- A153. “Uniform Atmospheric Retrieval Analysis of Ultracool Dwarfs II: Properties of 11 T-dwarfs.” Line, M., Marley, M., Liu, M., Morley, C. et al. (8 total authors) 2017, ApJ, 848, 83
- A152. “All-sky Co-moving Recovery Of Nearby Young Members (ACRONYM). II: The beta Pictoris Moving Group.” Shkolnik, E., Allers, K., Kraus, A. Liu, M., & Flagg, L. 2017, ApJ, 154, 69

- A151. “The Gold Standard: Accurate Stellar and Planetary Parameters for Eight *Kepler* M Dwarf Systems Enabled by Parallaxes.” Mann, A., Dupuy, T., Muirhead, P., Johnson, M., Liu, M. et al. (9 total authors) 2017, *ApJ*, 153, 267
- A150. “CFBDSIR 2149–0403: Young Isolated Planetary-Mass Object or High-Metallicity Low-Mass Brown Dwarf?” Delorme, P., Dupuy, T., Gagne, J., Reyle, C., Forveille, T., Liu, M. C., et al. (14 total authors) 2017, *A&A*, 602, A82
- A149. “Identification of Partially Resolved Binaries in Pan-STARRS1 Data.” Deacon, N. R., Magnier, E. A., Best, W. M. J., Liu, M. C. et al. (12 total authors) 2017, *MNRAS*, 468, 3499
- A148. “Individual Dynamical Masses of Ultracool Dwarfs.” Dupuy, T. & Liu, M. C., et al. 2017, *ApJ*, 231, 15
- A147. “A Search for L/T Transition Dwarfs With Pan-STARRS1 and WISE. III. Young L Dwarfs and Proper Motions in Taurus and Scorpius-Centaurus.” Best, W. M. J., Liu, M. C., Bowler, B. P., Aller, K. N., Zhang, Z. et al. (16 total authors) 2017, *ApJ*, 837, 95 (accepted 02/01/17)
- A146. “2MASS0213+3648 C: A wide T3 benchmark companion to an active, old M dwarf binary.” Deacon, N., Magnier, E., Liu, M. C. et al. (18 total authors) 2017, *MNRAS*, 467, 1126,
- A145. “Planets Around Low-Mass Stars (PALMS). VI. Discovery of a Remarkably Red Planetary-Mass Companion to the AB Dor Moving Group Candidate 2MASS J22362452+4751425.” Bowler, B. P, Liu, M. C., Mawet, D., et al. (14 total authors) 2017, *AJ*, 153, 18
- A144. “The Hawaii Infrared Parallax Program. II. Young Ultracool Dwarfs.” Liu, M. C., Dupuy, T. J. & Allers, K. N. 2016, *ApJ*, 833, 96
- A143. “Two Small Temperate Planets Transiting Nearby M Dwarfs in K2 Campaigns 0 and 1.” Schlieder, J., Crossfield, I. et al. (24 total authors) 2016, *ApJ*, 818, 87
- A142. “K2 Discovers a Busy Bee: An Unusual Transiting Neptune Found in the Beehive Cluster.” Obermeier, C., Henning, T., Schlieder, J. E., Crossfield, I. J. M., Petigura, E. A., Howard, A. W. et al. (23 total authors) 2016, *AJ*, 152, 223
- A141. “197 Candidates and 104 Validated Planets in K2’s First Five Fields.” Crossfield, I. J. M. et al. (43 total authors) 2016, *ApJS*, 226, 7
- A140. “High-Precision Radio and Infrared Astrometry of LSPM J1314+1320AB – II: Testing Pre–Main–Sequence Models at the Lithium Depletion Boundary with Dynamical Masses.” Dupuy, T. J., Forbrich, J., Rizzuto, A. et al. (8 total authors) 2016, *ApJ*, 827, 23
- A139. “High-Precision Radio and Infrared Astrometry of LSPM J1314+1320AB – I: Parallax, Proper Motions, and Limits on Planets.” Forbrich, J., Dupuy, T. J. et al. (9 total authors) 2016, *ApJ*, 827, 22
- A138. “Eleven Multi-planet Systems from K2 Campaigns 1 & 2 and the Masses of Two Hot Super-Earths.” Sinukoff, E. et al. (16 total authors) 2016, *ApJ*, 827, 78

- A137. “Brown Dwarfs in Young Moving Groups from Pan-STARRS. I. AB Doradus.”
Aller, K. M., Liu, M. C., et al. 2016, *ApJ*, 821, 120
- A136. “Planet Hunters X. KIC 8462852 – Where’s the flux?”
Boyajian, T. et al. (30 total authors) 2016, *MNRAS*, 457, 3988
- A135. “The Radial and Rotational Velocities of PSO J318.5338–22.8603, a Newly Confirmed Planetary-Mass Member of the β Pictoris Moving Group.” Allers, K. N., Gallimore, J. F., Liu, M. C., & Dupuy, T. J. 2016, *ApJ*, 819, 133
- A134. “Two Small Temperate Planets Transiting Nearby M Dwarfs in K2 Campaigns 0 and 1.”
Schlieder, J. E. et al. (24 total authors) 2016, *ApJ*, 818, 87
- A133. “Variability in a Young, L/T Transition Planetary-mass Object.”
Biller, B. et al. (18 total authors) 2015, *ApJ*, 813, 23
- A132. “Dynamical Masses of Young M Dwarfs: I. Masses and Orbital Parameters of GJ 3305 AB, the Wide Binary Companion to the Imaged Exoplanet Host 51 Eri.” Montet, B. et al. (10 total authors) 2015, *ApJ*, 813, L11
- A131. “A Search for L/T Transition Dwarfs with Pan-STARRS1 and WISE: L/T Transition Atmospheres and Young Discoveries.” Best, W. M. J., Liu, M. C., Magnier, E. A., Deacon, N. R., Aller, K. M., Redstone, J. et al. (16 total authors) 2015, *ApJ*, 814, 118
- A130. “Two Transiting Earth-size Planets Near Resonance Orbiting a Nearby Cool Star.”
Petigura, E. A. et al. (14 total authors) 2015, *ApJ*, 811, 102
- A129. “Improving signal-to-noise in the direct imaging of exoplanets and circumstellar disks with MLOCI.” Wahhaj, Z. et al. (13 total authors) 2015, *A&A*, 581, 24
- A128. “Early Results from VLT SPHERE: Long-slit Spectroscopy of 2MASS 0122–2439 B, a Young Companion Near the Deuterium Burning Limit.” Hinkely, S., Bowler, B., Vigan, A., Aller, K., Liu, M., et al. 2015 (11 total authors), *ApJL*, 805, L10
- A127. “Planets Around Low-mass Stars (PALMS). V. Age-dating Low-mass Companions to Members and Interlopers of Young Moving Groups.” Bowler, B., Shkolnik, E., Liu, M. C. et al. (25 total authors) 2015, *ApJ*, 806, 62
- A126. “The Gemini NICI Planet-Finding Campaign: Asymmetries in the HD 141569 Disc.”
Biller, B. A., Liu, M. C., Rice, W. K., Wahhaj, Z., Nielsen, E., Hayward, T., Kuchner, M., Close, L. M., Chun, M., Ftaclas, C., & Toomey, D. W. 2015, *MNRAS*, 450, 4446
- A125. “The Mass-Luminosity Relation in the L/T Transition: Individual Dynamical Masses for the New J-Band Flux Reversal Binary SDSSJ105213.51+442255.7AB.” Dupuy, T. J., Liu, M. C., Leggett, S. K., Ireland, M. J., Chiu, K., & Golimowski, D. A. 2015, *ApJ*, 805, 56
- A124. “On the Binary Frequency of Lowest Mass Members of the Pleiades with Hubble Space Telescope Wide Field Camera 3.” Garcia, E., Dupuy, T. J., Allers, K. N., Liu, M. C. & Deacon, N. 2015, *ApJ*, 804, 65

- A123. “Discovery of a Low-Luminosity, Tight Substellar Binary at the T/Y Transition.”
Dupuy, T. J., Liu, M. C. & Leggett, S. K. 2015, *ApJ*, 803, 102
- A122. “A nearby M star with three transiting super-Earths discovered by K2.”
Crossfield, I. J. M. et al. 2015, *ApJ*, 804, 10
- A121. “An ALMA Disk Mass for the Candidate Protoplanetary Companion FW Tau.”
Kraus, A. L., Andrews, S. M., Bowler, B. P., Herczeg, G., Ireland, M. J., Liu, M. C.,
Metchev, S. & Cruz, K. L. 2015, *ApJ*, 798, 23
- A120. “WISEP J004701.06+680352.1: An Intermediate Surface Gravity, Dusty Brown Dwarf in
the AB Dor Moving Group.” Gizis, J. E., Allers, K. N., Liu, M. C., Harris, H. C., Faherty,
J. K., Burgasser, A. J. & Kirkpatrick, J. D. 2015, *ApJ*, 799, 203
- A119. “Searching for T dwarfs in the ρ Oph dark cloud L1688.”
Chiang, P., Chen, W.-P., Albert, L., Liu, M. & Magnier, E. A. 2015, *MNRAS*, 448, 522
- A118. “Herschel/PACS View of Disks around Low-Mass Stars and Brown Dwarfs in the TW Hya
Association.” Liu, Y., Herczeg, G. J., Gong, M., Allers, K. N., Brown, J. M., Kraus, A. L.,
Liu, M. C., Shkolnik, E. L., & van Dishoeck, E. F. 2015, *A&A*, 573, 63
- A117. “Astrometric Calibration of the Gemini NICI Planet-Finding Campaign.”
Hayward, T. L., Biller, B. A., Liu, M. C., Nielsen, E. L., Wahhaj, Z., Chun, M., Ftaclas, C.,
Hartung, M. & Toomey, D. W. 2014, *PASP*, 126, 1112
- A116. “Planets Around Low-Mass Stars (PALMS). IV. The Outer Architectures of M Dwarf Plan-
etary Systems.” Bowler, B., Liu, M. C., Shkolnik, E. & Tamura, M. 2014, *ApJS*, 216, 7
- A115. “The Gemini NICI Planet-Finding Campaign. The Orbit of the Young Exoplanet β Pic-
toris b.” Nielsen, E., Liu, M. et al. (16 total authors) 2014, *ApJ*, 794, 158
- A114. “Wide Cool and Ultracool Companions to Nearby Stars from Pan-STARRS 1.”
Deacon, N., Liu, M. et al. 2014, *ApJ*, 792, 119
- A113. “New Evidence for a Substellar Luminosity Problem: Dynamical Mass for the Brown
Dwarf Binary Gl 417BC.” Dupuy, T. J., Liu, M. C., & Ireland, M. J. 2014, *ApJ*, 790, 133
- A112. “The Gemini NICI Planet-Finding Campaign: The Offset Ring of HR 4796 A.”
Wahhaj, Z., Liu, M. C. et al. 2014, *A&A*, 567, 34
- A111. “Prospecting in Ultracool Dwarfs: Measuring the Metallicities of Late-M Dwarfs.”
Mann, A. W., Deacon, N. R., Gaidos, E., Ansdell, M., Brewer, J. M., Liu, M. C., Magnier,
E. A., & Aller, K. M. 2014, *ApJ*, 147, 160
- A110. “A Stellar Census of the Tucana-Horologium Moving Group.”
Kraus, A. L., Shkolnik, E. L., Allers, K. N., & Liu, M. C. 2014, *AJ*, 147, 146
- A109. “Magellan Adaptive Optics First-Light Observations of the Exoplanet β Pictoris b. I. Direct
Imaging in the Far-Red Optical with MagAO+VisAO and in the Near-Ir with NICI.” Males,
J. R. et al. (23 total authors) 2014, *ApJ*, 786, 32

- A108. “Spectroscopic Confirmation of Young Planetary-mass Companions on Wide Orbits.” Bowler, B. P., Liu, M. C., Kraus, A. L., & Mann, A. W. 2014, *ApJ*, 784, 65
- A107. “The Rise of SN 2014J in the Nearby Galaxy M82.” Goobar, A. et al. (34 total authors) 2014, *ApJ*, 784, 12
- A106. “Three Wide Planetary-Mass Companions to FW Tau, ROXS 12, and ROXS 42B.” Kraus, A. K., Ireland, M. J., Cieza, L. A., Hinkley, S., Dupuy, T. J., Bowler, B. P., & Liu, M. C. 2014, *ApJ*, 781, 20
- A105. “The Gemini NICI Planet-Finding Campaign: The Companion Detection Pipeline.” Wahhaj, Z., Liu, M., Biller, B., Nielsen, E. et al. (11 authors) 2013, *ApJ*, 779, 80
- A104. “The Extremely Red, Young L Dwarf PSO J318–22: A Free-Floating Planetary-Mass Analog to Directly Imaged Young Gas-Giant Planets.” Liu, M. C., Magnier, E. A., Deacon, N. R., Allers, K. N., Dupuy, T. J., Kotson, M. C., Aller, K. M. et al. (19 total authors) 2013, *ApJL*, 777, 20
- A103. “Resolved Spectroscopy of the T8.5 and Y0-0.5 Binary WISEPC J121756.91+162640.2AB.” Leggett, S. K., Liu, M. C., Dupuy, T. J., Morley, C. V., Marley, M. S., & Saumon, D. 2014, *ApJ*, 780, 62
- A102. “The Binary White Dwarf LHS 3236.” Harris, H. C. et al. (16 total authors) 2013, *ApJ*, 779, 21
- A101. “The Gemini NICI Planet-Finding Campaign: The Frequency of Planets around Young Moving Group Stars.” Biller, B., Liu, M., Wahhaj, Z., Nielsen, E., Hayward, T. et al. (22 total authors) 2013, *ApJ*, 777, 160
- A100. “A Search for L/T Transition Dwarfs With Pan-STARRS1 and WISE: Discovery of Seven Nearby Objects Including Two Candidate Spectroscopic Variables.” Best, W. M. J., Liu, M. C., Magnier, E. A., Aller, K. M., Deacon, N. R., Dupuy, T. J., Redstone, J. et al. (16 total authors), *ApJ*, 777, 84
- A99. “Discovery of a Visual T-Dwarf Triple System and Binarity at the L/T Transition.” Radigan, J., Jayawardhana, R., Lafreniere, D., Dupuy, T. J., Liu, M. C. & Scholz, A. 2013, *ApJ*, 778, 36
- A98. “Planets Around Low-Mass Stars (PALMS). III. A Young Dusty L Dwarf Companion at the Deuterium-Burning Limit.” Bowler, B. P., Liu, M. C., Shkolnik, E. L., & Dupuy, T. J. 2013, *ApJ*, 774, 55
- A97. “The Gemini NICI Planet-Finding Campaign: The Frequency of Giant Planets Around Debris Disk Stars.” Wahhaj, Z., Liu, M. C., Nielsen, E., Biller, B., Hayward, T. et al. (21 total authors) 2013, *ApJ*, 773, 179
- A96. “A Pan-STARRS + UKIDSS Search for Young, Wide Planetary-Mass Companions in Upper Scorpius.” Aller, K. M., Kraus, A. K., Liu, M. C., et al. (9 total authors) 2013, *ApJ*, 773, 63

- A95. "The Gemini NICI Planet-Finding Campaign: The Frequency of Giant Planets around Young B and A Stars." Nielsen, E., Liu, M. C., Wahhaj, Z., Biller, B. A., Hayward, T. L. et al. (25 total authors) 2013, *ApJ*, 773, 179
- A94. "A Near-Infrared Spectroscopic Study of Young Field Ultracool Dwarfs." Allers, K. N. & Liu, M. C. 2013, *ApJ*, 772, 79
- A93. "Seventy-six T Dwarfs from the UKIDSS LAS: Benchmarks, Kinematics, and Updated Space Density." Burningham, B. et al. (37 total authors) 2013, *MNRAS*, 433, 457
- A92. "Infrared Parallaxes of Young Field Brown Dwarfs and Connections to Directly Imaged Gas-Giant Exoplanets." Liu, M. C., Dupuy, T. J., & Allers, K. N. 2013, *AN*, 334, 85
- A91. "Discovery of an Unusually Red L-type Brown Dwarf." Gizis, J. E., Faherty, J. K., Liu, M. C. et al. (9 total authors) 2012, *Astronomical Journal*, 144, 94
- A90. "Two Extraordinary Substellar Binaries at the T/Y Transition and the Y-Band Fluxes of the Coolest Brown Dwarfs." Liu, M., Dupuy, T., Bowler, B., Leggett, S., & Best, W. 2012, *Astrophysical Journal*, 758, 57
- A89. "Planets around Low-Mass Stars (PALMS). II. A Low-mass Companion to the Young M Dwarf GJ 3629 Separated by 0.2''." Bowler, B. P., Liu, M. C., Shkolnik, E. L., Tamura, M. 2012, *Astrophysical Journal*, 756, 69
- A88. "Planets around Low-Mass Stars (PALMS). I. A Substellar Companion to the Young M Dwarf 1RXS J235133.3+312720." Bowler, B. P., Liu, M. C., Shkolnik, E. L., Dupuy, T. J., Cieza, L. A., Kraus, A. L., & Tamura, M. 2012, *Astrophysical Journal*, 753, 142
- A87. "LHS 2803B: A Very Wide Mid-T Dwarf Companion to an Old M Dwarf Identified from Pan-STARRS1." Deacon, N., Liu, M., Magnier, E., Bowler, B., Mann, A., Redstone, J. et al. (15 total authors) 2012, *Astrophysical Journal*, 757, 100
- A86. "Identifying the Young Low-Mass Stars Within 25 pc. II. Distances, Kinematics and Group Membership." Shkolnik, E., Anglada-Escude, G., Liu, M., Bowler, B., Weinberger, A., Boss, A., Reid, I., & Tamurea, M. 2012, *Astrophysical Journal*, 758, 56
- A85. "The Hawaii Infrared Parallax Program. I. Ultracool Binaries and the L/T Transition." Dupuy, T. & Liu, M. 2012, *Astrophysical Journal Supplement*, 201, 19
- A84. "HIP 38939B: A New Benchmark T Dwarf in the Galactic Plane Discovered with Pan-STARRS1." Deacon, N., Liu, M., Magnier, E., Bowler, B., Redstone, J., et al. (16 total authors) 2012, *ApJ*, 755, 94
- A83. "A Disk Around the Planetary-Mass Companion GSC 06214-00210 b: Clues About the Formation of Gas Giants on Wide Orbits." Bowler, B., Liu, M., Kraus, A., Mann, A. & Ireland, M. 2011, *Astrophysical Journal*, 743, 148
- A82. "A Search for High Proper Motion T Dwarfs with Pan-STARRS1 + 2MASS + WISE." Liu, M., Deacon, N., Magnier, E., Aller, K., Bowler, B., Dupuy, T., Goldman, B. et al. 2011, *Astronomical Journal*, 740, L32

- A81. “Four New T Dwarfs Identified in PanSTARRS1 Commissioning Data.” Deacon, N., Liu, M., Magnier, E., Bowler, B., Goldman, B., Redstone, J. et al. 2011, *Astronomical Journal*, 142, 77
- A80. “Discovery of Two L & T Binaries with Wide Separations and Peculiar Photometric Properties.” Artigau, E., LaFreniere, D., Doyon, R., Liu, M., Dupuy, T., Albert, L., Gagne, J., Malo, L. & Gratadour, D. 2011. *Astrophysical Journal*, 739, 48
- A79 “CFBDSIR J1458+1013B: A Very Cold ($>T_{10}$) Brown Dwarf in a Binary System.” Liu, M., Delorme, P., Dupuy, T., Bowler, B., Albert, L., Artigau, E., Reylé, C., Forveille, T. & Delfosse, X. 2011, *Astrophysical Journal*, 740, 108
- A78. “A Keck LGS AO Search for Brown Dwarf and Planetary Mass Companions to Upper Scorpius Brown Dwarfs.” Biller, B., Allers, K., Liu, M., Close, L. & Dupuy, T. 2011, *Astrophysical Journal*, 730, 39
- A77. “The Gemini NICI Planet-Finding Campaign: Discovery of a Substellar L Dwarf Companion to the Nearby Young M Dwarf CD-35 2722.” Wahhaj, Z., Liu, M., Biller, B. A., Clarke, F., Nielsen, E. L., Close, L. M., Hayward, T. L., Mamajek, E. E., et al. (26 total authors) 2011, *Astrophysical Journal*, 729, 139
- A76. “Searching for Young M Dwarfs with GALEX.” Shkolnik, E., Liu, M. C., Reid, I. N., Dupuy, T., & Weinberger, A. J. 2011, *Astrophysical Journal*, 727, 6
- A75. “Near-Infrared Spectroscopy of the Extrasolar Planet HR 8799 b.” Bowler, B., Liu, M., Dupuy, T., & Cushing, M. 2010, *Astrophysical Journal*, 723, 850
- A74. “The Gemini NICI Planet-Finding Campaign: Discovery of a Close Substellar Companion to the Nearby Young Solar Analog PZ Tel.” Biller, B., Liu, M., Wahhaj, Z., Nielsen, E., Close, L., Dupuy, T., Hayward, T., Burrows, A., et al. (27 total authors) 2010, *Astrophysical Journal Letters*, 720, 82
- A73. “A Spitzer Search for Planetary-Mass Brown Dwarfs with Circumstellar Disks: Candidate Selection.” Harvey, P. M., Jaffe, D. T., Allers, K., Liu, M. 2010, *Astrophysical Journal*, 720, 1374
- A72. “On the Distribution of Orbital Eccentricities for Very Low-Mass Binaries.” Dupuy, T. & Liu, M. 2011, *Astrophysical Journal*, 733, 122
- A71. “Studying the Physical Diversity of Late-M Dwarfs with Dynamical Masses.” Dupuy, T., Liu, M., Bowler, B., Cushing, M., Helling, C., Witte, S., & Hauschildt, P. 2010, *Astrophysical Journal*, 721, 1725 (accepted July 2010)
- A70. “Hawaii Quasar and T-Dwarf (HQT) Survey I. Method and Discovery of Faint Field Ultra-cool Dwarfs.” Kakazu, Y., Hu, E., Liu, M. C., Wang, W.-H., Wainscoat, R. J., & Capak, P. L. 2010 *Astrophysical Journal*, 723, 184
- A69. “SDSS J141624.08+134826.7: A Nearby Blue L Dwarf From the Sloan Digital Sky Survey.” Bowler, B. P., Liu, M. C., & Dupuy, T. J. 2010, *Astrophysical Journal*, 710, 45

- A68. “Discovery of a Highly Unequal-Mass Binary T Dwarf with Keck Laser Guide Star Adaptive Optics: A Coevality Test of Substellar Theoretical Models and Effective Temperatures.” Liu, M. C., Leggett, S. K. & Dupuy, T. J. 2010, *Astrophysical Journal*, 722, 311
- A67. “Retired A Stars and Their Companions. III. Comparing the Mass-Period Distributions of Planets Around A-Type Stars and Sun-Like Stars.” Bowler, B. P., Johnson, J. A., Marcy, G. W., Henry, G. W. et al. (11 total authors) 2010, *Astrophysical Journal*, 709, 396
- A66. “Thirty New Low-Mass Spectroscopic Binaries.”
E. Shkolnik, L. Hebb, M. C. Liu, I. N. Reid, & A. C. C. Cameron 2010, *Astrophysical Journal*, 716, 1522
- A65. “Discovery of a Young L-Dwarf Binary, SDSS J2249+0044AB.”
Allers, K. N., Liu, M. C., Dupuy, T. J. & Cushing, M. C. 2010, *Astrophysical Journal*, 715, 561
- A64. “The Benchmark Ultracool Subdwarf HD 114762B: A Test of Low-metallicity Atmospheric and Evolutionary Models.” Bowler, B., Liu, M. & Cushing, M. 2009, *Astrophysical Journal*, 706, 1114
- A63. “Dynamical Mass of the M8+M8 Binary 2MASS J2206–2047AB.”
Dupuy, T. J., Liu, M. C. & Bowler, B. P. 2009, *Astrophysical Journal*, 706, 328
- A62. “Detectability of Transiting Jupiters and Low-Mass Eclipsing Binaries in Multi-Epoch All-Sky Surveys.” Dupuy, T. J. & Liu, M. C. 2009, *Astrophysical Journal*, 704, 1519
- A61. “Keck Laser Guide Star Adaptive Optics Monitoring of the M8+L7 Binary LHS 2397aAB: First Dynamical Mass Benchmark at the L/T Transition.” Dupuy, T. J., Liu, M. C., & Ireland, M. J. 2009, *Astrophysical Journal*, 699, 168
- A60. “2MASS 2234+4041AB: A Wide, Accreting, Low-Mass Binary in the LkH α 233 Group.”
Allers, K. N., Liu, M. C., et al. (9 total authors), *Astrophysical Journal*, 697, 824
- A59. “The Discovery of an M4+T8.5 binary system.”
Burningham, B., Pinfield, D. J., Leggett, S. K., Tinney, C. G., Liu, M. C. et al. (21 total authors) 2009, *MNRAS*, 395, 1237
- A58. “Identifying the Young Low-Mass Stars Within 25 pc.”
Shkolnik, E., Liu, M. C., & Reid, I. N. 2009, *Astrophysical Journal*, 699, 649
- A57. “The Dynamical Mass of the Substellar Benchmark Binary HD 130948BC.”
Dupuy, T. J., Liu, M. C., & Ireland, M. J. 2009, *Astrophysical Journal*, 692, 729
- A56. “The Circumstellar Environment of Young Low-Mass Object IRAS 04158+2805.”
Andrews, S. M., Liu, M. C., Williams, J. P. & Allers, K. N. 2008, *Astrophysical Journal*, 685, 1039
- A55. “Subtle Signatures of Multiplicity in Late-type Dwarf Spectra: The Unresolved M8.5 + T5 Binary 2MASS J03202839–0446358.” Burgasser, A. J., Liu, M. C., Ireland, M. J., Cruz, K. L. & Dupuy, T. J. 2008, *Astrophysical Journal*, 681, 579

- A54. “HN Peg B: A Test of Models of the L to T Dwarf Transition.”
Leggett, S. K. et al. (10 authors) 2008, *Astrophysical Journal*, 682, 1256
- A53. “CFBDS J005910.90–011401.3: Reaching the T-Y Brown Dwarf Transition?”
Delorme, P. et al. (12 authors) 2008, *A&A*, 482, 961
- A52 “Keck Laser Guide Star Adaptive Optics Monitoring of 2MASS J1534–2952AB: First Dynamical Mass Determination of a Binary T Dwarf.” Liu, M. C., Dupuy, T. J., & Ireland, M. J. et al. 2008, *Astrophysical Journal*, 689, 436
- A51. “BD –22°5866: A Low-mass Quadruple-lined Spectroscopic *and* Eclipsing Binary,”
Shkolnik, E., Liu, M. C., Reid, I. N., Hebb, L., Cameron, A. C., Torres, C. A., and Wilson, D. N. 2008, *Astrophysical Journal*, 682, 1248
- A50. “Four T Dwarfs from the UKIRT Infrared Deep Sky Survey (UKIDSS) Southern Stripe.”
Chiu, K., Liu, M. et al. (11 authors) 2008, *MNRAS*, 385, 53
- A49. “L Dwarf Binaries in the 20-Parsec Sample.”
Reid, I. N., Cruz, K. L., Burgasser, A. J., & Liu, M. C. 2008, *Astronomical Journal*, 135, 580
- A48. “A Very Cool Brown Dwarfs in UKIDSS Data Release 1.”
Warren, S. et al. (18 authors) 2007, *MNRAS*, 381, 1400
- A47. “Physical and Spectral Characteristics of the T8 and Later-Type Dwarfs.”
Leggett, S., Marley, M., Freedman, R., Saumon, D., Liu, M., Geballe, T., Golimowski, D., & Stephens, D. 2007, *Astrophysical Journal*, 667, 537
- A46. “Eight New Late-T Dwarfs Discovered by the UKIDSS Large Area Survey Data Release 1.” Lodiéu, N. et al. (36 authors) 2007, *MNRAS*, 379, 1423
- A45. “The Late T-Dwarf Companion to the Exoplanet Host Star HD 3651: A New Benchmark for Gravity and Metallicity Effects in Ultracool Spectra.” Liu, M., Leggett, S. & Chiu, K. 2007, *Astrophysical Journal*, 660, 1507
- A44. “Near-IR Spectroscopy of Young Brown Dwarfs with Disks.”
Allers, K., Jaffe, D., Luhman, K., Liu, M., et al. (10 authors) 2007, *Astrophysical Journal*, 657, 511
- A43. “Discovery of the High Proper Motion L Dwarf Binary 2MASS 15200224–4422419AB.”
Burgasser, A.,Looper, D. L., Kirkpatrick, J. D., & Liu, M. 2007, *Astronomical Journal*, 658, 557
- A42. “S-COSMOS: The Spitzer Legacy Survey of the HST-ACS 2-Square Degree COSMOS Field. I: Survey Design and Scientific Goals.” Sanders, D. B. et al. 2007, *Astrophysical Journal Supplement Series*, 172, 86
- A41. “A Re-Appraisal of the Habitability of Planets Around M Dwarf Stars.”
Tarter, J. et al. (35 authors) 2007, *Astrobiology*, 7, 30

- A40. "CLOUDS Search for Variability in Brown Dwarf Atmospheres. I. Infrared Spectroscopic Time Series of L/T Transition Brown Dwarfs." Goldman, B. and the CLOUDS collaboration 2008, *Astronomy & Astrophysics*, 487, 272
- A39. "SDSS 1534+1615AB: A Novel T Dwarf Binary Found with Laser Guide Star Adaptive Optics and the Potential Role of Binarity in the L/T Transition." Liu, M., Leggett, S., Golimowski, D., Chiu, K., Fan, X., Geballe, T., Schneider, D., & Brinkmann, J. 2006, *Astrophysical Journal*, 647, 1393
- A38. "Kelu-1 is a Binary L Dwarf: First Brown Dwarf Science from Laser Guide Star Adaptive Optics." Liu, M. & Leggett, S. 2005, *Astrophysical Journal*, 634, 616
- A37. "New Near-Infrared Surface Brightness Fluctuation Models." Mouhcine, M., Gonzalez, R. A., & Liu, M. 2005, *MNRAS*, 362, 1208
- A36. "Morphologies in a Cluster of Extremely Red Galaxies with Old Stellar Populations at $z=1.34$." Fu, H., Stockton, A., & Liu, M. 2005, *Astrophysical Journal*, 632, 831
- A35. "Near-IR Surface Brightness Fluctuations and Optical Colours of Magellanic Star Clusters." Gonzalez, R. A., Albarran, M. Y., Mouhcine, M., Liu, M. C., Bruzual, G., & Batz, B. 2005, *MNRAS*, 363, 1279
- A34. "Substructure in the Circumstellar Disk around the Young Star AU Mic (GJ 803)." Liu, M. C. 2004, *Science*, 305, 1442
- A33. "A Sub-Millimeter Survey of Nearby Young Stars for Cold Dust: Discovery of Debris Disks Around Two Low-Mass Stars." Liu, M. C., Matthews, B. C., Williams, J. P. & Kalas, P. G. 2004 *Astrophysical Journal*, 608, 526
- A32. "IR Surface Brightness Fluctuations of Magellanic Globular Clusters." González, R. A., Liu, M. C., & Bruzual, G. 2004, *Astrophysical Journal*, 611, 270
- A31. "Discovery of a Large Dust Disk Around AU Microscopium." Kalas, P., Liu, M. C., & Matthews, B. C. 2004, *Science*, 303, 1990
- A30. "23 High Redshift Supernovae from the IfA Deep Survey: Doubling the SN Sample at $z > 0.7$." Barris, B. J. et al. (31 authors) 2004, *Astrophysical Journal*, 602, 571
- A29. "Detection of Cool Dust around the G2V Star HD 107146." Williams, J. P., Najita, J., Liu, M. C., Bottinelli, S., Carpenter, J. M., Hillenbrand, L. A., & Meyer, M. 2004, *Astrophysical Journal*, 585, 372
- A28. "A Giant Outburst at Millimeter Wavelengths in the Orion Nebula." Bower, G. C., Plambeck, R. L., Bolatto, A., McCrady, N., Graham, J. R., de Pater, I., Liu, M. C., & Baganoff, F. K. 2003, *Astrophysical Journal*, 598, 1140
- A27. "Optical and Near-Infrared Spectroscopy of a High-Redshift Hard X-ray Emitting Spiral Galaxy." S. Dawson, N. McCrady, D. Stern, M. Eckart, H. Spinrad, M. C. Liu & J. R. Graham 2003, *Astrophysical Journal*, 125, 1236

- A26. "A Survey for Circumstellar Disks around Young Substellar Objects."
Liu, M. C., Najita, J., & Tokunaga, A. T. 2003,
Astrophysical Journal, 585, 372
- A25. "Measuring Distances and Probing Unresolved Stellar Populations of Galaxies Using IR Surface Brightness Fluctuations." Jensen, J. B., Tonry, J. T., Barris, B. J., Thompson, R. I., Liu, M. C., Rieke, M. J., Ajhar, E. A., & Blakeslee, J. P. 2003, *Astrophysical Journal*, 583, 712
- A24. "Discovery of a Methane Dwarf from the IfA-Deep Survey."
Liu, M. C., Wainscoat, R., Martín, E., Barris, B., & Tonry, J. 2002,
Astrophysical Journal Letters, 568, L107
- A23. "Crossing the Brown Dwarf Desert Using Adaptive Optics: A Very Close L-Dwarf Companion to the Nearby Solar Analog HR 7672." Liu, M. C., Fischer, D., Graham, J. R., Lloyd, J. P., Marcy, G. W., & Butler, P. et al. 2002, *Astrophysical Journal*, 571, 519
- A22. "A Search for Stellar Companions to Stars with Planets."
Patience, J., McCabe, C., White, R., Ghez, A. M., Lloyd, J. P., Liu, M. C., Graham, J. R., et al. 2002, *Astrophysical Journal*, 581, 654
- A21. "Infrared Surface Brightness Fluctuations of the Coma Elliptical NGC 4874 and the Value of the Hubble Constant." Liu, M. C., & Graham, J. R. 2001, *Astrophysical Journal Letters*, 557, L31
- A20. "Surface Brightness Fluctuations of Fornax Cluster Galaxies: Calibration of Infrared SBFs and Evidence for Recent Star Formation." Liu, M. C., Graham, J. R., & Charlot, S. 2002, *Astrophysical Journal*, 564, 216
- A19. "Two Substellar Companions Orbiting HD 168443."
Marcy, G. W., Butler, B. P., Vogt, S. S., Liu, M. C., Laughlin, G., Apps, K., Graham, J. R., Lloyd, J. P., Luhman, K. L., & Jayawardhana, R. 2001 *Astrophysical Journal*, 555, 418
- A18. "The Infrared Surface Brightness Fluctuation Hubble Constant."
Jensen, J. B., Tonry, J. L., Thompson, R. I., Ajhar, E. A., Lauer, T. R., Rieke, M. J., Postman, M., & Liu, M. C. 2001, *Astrophysical Journal*, 550, 503
- A17. "A Candidate Submillimeter-Selected Proto-Cluster."
Iverson, R. J., Dunlop, J. S., Smail, I., Dey, A., Liu, M. C. & Graham J. R. 2000,
Astrophysical Journal, 542, 27
- A16. "Three High-Redshift Millimeter Sources and Their Radio and Near-IR Identifications."
Bertoldi, F., Carilli, C., Menten, K., Owen, F., Dey, A., Graham, J. R., Gueth, F., Kreysa, E., Liu, M. C., Motte, F., Schilke, P. & Zylka, R. 2000, *Astronomy & Astrophysics*, 360, 92
- A15. "Theoretical Predictions for Surface Brightness Fluctuations and Implications for Stellar Populations of Elliptical Galaxies." Liu, M. C., Charlot, S., & Graham, J. R. 2000,
Astrophysical Journal, 543, 644

- A14. "The Nature of the Halo Population of NGC 5128 Resolved with NICMOS on the Hubble Space Telescope." Marleau, F. R., Graham, J. R., Liu, M. C., & Charlot, S. 2000, *Astronomical Journal*, 120, 1779
- A13. "Extremely Red Objects in the Field of QSO 1213–0017: A Galaxy Concentration at $z=1.31$." Liu, M. C., Dey, A., Graham, J. R., Bundy, K. A., Steidel, C. C., Adelberger, K. L., & Dickinson, M. E. 2000, *Astronomical Journal*, 119, 2556
- A12. "Tests of the Accelerating Universe with Near-Infrared Observations of a High-Redshift Type Ia Supernova." Riess, A. G., Filippenko, A. V., Liu, M. C., Challis, P., Clocchiatti, A., Diercks, A. et al. (28 authors) 2000, *Astrophysical Journal*, 536, 62
- A11. "The Stellar Content of the Halo of NGC 5907 from Deep NICMOS Imaging." Zepf, S., Liu, M. C., Marleau, F. R., Sackett, P. & Graham, J. R. 2000, *Astronomical Journal*, 119, 1701
- A10. "The New Complex Gravitational Lens System HE 0230–2130." Wisotzki, L., Christlieb, N., Liu, M. C., Maza, J., Morgan, N. D., & Schechter, P. L. 1999, *Astronomy & Astrophysics*, 348, 41
- A9. "Observations of a $z = 1.44$ Dusty, Ultraluminous Galaxy and Implications for Deep Sub-mm Surveys." Dey, A., Graham, J. R., Ivison, R. J., Smail, I., Wright, G. S., & Liu, M. 1999, *Astrophysical Journal*, 519, 610
- A8. "Two New Planets in Eccentric Orbits." Marcy, G. W., Butler, R. P., Vogt, S. S., Fischer, D. & Liu, M. C. 1999, *Astrophysical Journal*, 520, 239
- A7. "Keck Infrared Observations of Jupiter's Ring System Near Earth's 1997 Ring Plane Crossing." de Pater, I., Showalter, M. R., Burns, J. A., Nicholson, P. D., Liu, M. C., Hamilton, D. P. & Graham, J. R. 1999, *Icarus*, 138, 214
- A6. "Image Improvement from a Sodium-Layer Laser Guide Star Adaptive Optics System." Max, C. E. et al. (16 authors) 1997, *Science*, 277, 1649
- A5. "Investigation of Crater 'Saturation' Using Spatial Statistics." Squyres, S., Howell, C., Liu, M. C., & Lissauer, J. J. 1997, *Icarus*, 125, 67
- A4. "IRAS FSC 15307+3252: Gravitationally-Lensed Seyfert or Cannibal Elliptical at $z = 0.93$?" Liu, M. C., Graham, J. R., & Wright, G. S. 1996, *Astrophysical Journal*, 470, 771
- A3. "Mid-Infrared Imaging of Young Stellar Objects." Liu, M. C., Graham, J. R., Ghez, A. M., Meixner, M., Skinner, C. J., Keto, E., Ball, R., Arens, J. F., & Jernigan, J. G. 1996, *Astrophysical Journal*, 461, 334
- A2. "High Resolution Near-Infrared Imaging of FSC 10214+4724: Evidence for Gravitational Lensing." Graham, J. R. & Liu, M. C. 1995, *Astrophysical Journal*, 449, L29

- A1. “W.M. Keck Telescope Observations of the Comet Shoemaker-Levy Fragment R Impact with Jupiter.” Graham, J. R., de Pater, I., Jernigan, J. G., Liu, M. C., & Brown, M. E. 1995, *Science*, 267, 1320

B. Conference Proceedings, Research Notes, and White Papers (incomplete)

- B47. “Young Stars & Planets Near the Sun in 2015: Five Takeaways and Five Predictions.” M. Liu 2015, *Young Stars & Planets Near the Sun*, Proceedings of the International Astronomical Union, IAU Symposium, Volume 314, pp. 290-294 [invited conference summary]
- B46. “The infrared imaging spectrograph (IRIS) for TMT: overview of innovative science programs.” S. Wright et al. 2014, *Proceedings of the SPIE: Ground-Based and Airborne Instrumentation for Astronomy V*, 9147, 9
- B45. “Constraining the Evolution of Brown Dwarf Binarity as a Function of Age: A Keck LGS AO Search for Brown Dwarf and Planetary Mass Companions to Upper Scorpius Brown Dwarfs.” Biller, B., Allers, K., Liu, M., Close, L., & Dupuy, T. 2011 *16th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun* (eds. Johns-Krull, C., Browning, M. K., & West, A. A.), ASP Conference Series, 448, 31
- B44. “Testing Substellar Models with Dynamical Mass Measurements.” Dupuy, T. J., Liu, M. C., & Ireland, M. J. 2011, *Research, Science and Technology of Brown Dwarfs and Exoplanets* (Shanghai, China; eds. Martin, E.L., Ge., J., & Lin, W.) in European Physical Journal Web of Conferences, 16, 4004
- B43. “Understanding Sub-Stellar Populations using Wide-Field Infrared Surveys.” Pinfield, D. J. et al. 2011 (27 total authors), *Research, Science and Technology of Brown Dwarfs and Exoplanets* (Shanghai, China; eds. Martin, E.L., Ge., J., & Lin, W.) in European Physical Journal Web of Conferences, 16, 6002
- B42. “Testing Theory with Dynamical Masses and Orbits of Ultracool Binaries.” Dupuy, T. J., Liu, M. C., & Ireland, M. J. 2011, *16th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun* (eds. Johns-Krull, C., Browning, M. K., & West, A. A.), ASP Conference Series, 448, 111
- B41. “A Uniform Analysis of 118 Stars with High-contrast Imaging: Long-period Extrasolar Giant Planets are Rare Around Sun-like Stars.” Nielsen, E. L., Close, L. M., Liu, M., Biller, B. A. & Wahhaj, Z. 2010, *Proceedings of the Spirit of Lyot 2010: Direct Detection of Exoplanets and Circumstellar Disks* (ed. A. Boccaletti)
- B40. “The Gemini NICI Planet-Finding Campaign: Discovery of a Close Substellar Companion to a Young Solar Analog.” Biller, B. A., Liu, M. C., Wahhaj, Z., Nielsen, E. L. et al. 2010 (15 total authors), *Proceedings of the Spirit of Lyot 2010: Direct Detection of Exoplanets and Circumstellar Disks* (ed. A. Boccaletti) ;
- B39. “Testing Models with Brown Dwarf Binaries.” Dupuy, T. J. & Liu, M. C. 2010, *Highlights of Astronomy* (Proceedings of 37th IAU General Assembly: “Young Stars, Brown Dwarfs, and Protoplanetary Disks”), 15, 758

- B38. "Ultracool Dwarf Science from Widefield Multi-Epoch Surveys." Deacon, N. R., Pinfield, D. J., Lucas, P. W., Liu, M. C., et al. 2011 (12 total authors), *16th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun* (eds. Johns-Krull, C., Browning, M. K., & West, A. A.), ASP Conference Series, 448, 429
- B37. "The Gemini NICI Planet-Finding Campaign." M. Liu et al. (24 authors) 2010, *Proceedings of the SPIE: Advances in Adaptive Optics* (San Diego, CA), in press
- B36. "Testing Substellar Models with Dynamical Mass Measurements." Dupuy, T., Liu, M. & Ireland, M. 2009, *Proceedings of "New Technologies for Probing the Diversity of Brown Dwarfs and Exoplanets"*, in press
- B35. "The Pan-STARRS 3II Survey and the Brown Dwarf Factory." Magnier, E. A., Liu, M. C., Goldman, B., Monet, D. G., Chambers, K. C., & Kaiser, N., in *The Galactic Plane in Depth and Across the Spectrum*", XXVIth IAU General Assembly Conference Proceedings (Aug 2009), in press
- B34. "Testing Models with Brown Dwarf Binaries." Dupuy, T. & Liu, M., *Proceedings of IAU 2009 Session S7: "Young Stars, Brown Dwarfs, and Protoplanetary Disks"* (Aug 2009), in press
- B33. "Direct Detection and Spectroscopic Characterization of Extrasolar Planets." Macintosh, B. et al. (10 authors) 2009, white paper submitted to the Astro2010 Decadal Survey
- B32. "The Formation and Architecture of Young Planetary Systems." Kraus, A. et al. (8 authors) 2009, white paper submitted to the Astro2010 Decadal Survey
- B31. "Confronting Substellar Theoretical Models with Stellar Ages." Dupuy, T., Liu, M., & Ireland, M. 2009, *Proceedings of IAU Symposium 258: The Ages of Stars* (ed. E. Mamajek, D. Soderbolm, & R. Wyse), ASP Conference Series, 258, 337
- B30. "Observing Strategies for the NICI Campaign to Directly Image Extrasolar Planets." Biller, B. et al. (10 authors) 2009, *Proceedings of the 15th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun* (ed. E. Stempels), AIP Conference Series, 1094, 425
- B29. "Precision radial velocity spectrograph." Jones, H. et al. (14 authors) 2008, *Proceedings of the SPIE: Ground-based and Airborne Instrumentation for Astronomy* (ed. I. McLean & M. Casali), 7014, 31
- B28. "The Gemini NICI Planet-Finding Campaign." Liu, M. et al. (12 authors) 2008, *Proceedings of the 15th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun* (ed. E. Stempels), AIP Conference Series, 1094, 461
- B27. "Fundamental Properties of Low-Mass Stars and Brown Dwarfs." Liu, M. et al. (10 authors) 2008, *Proceedings of the 15th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun* (ed. E. Stempels), AIP Conference Series, 1094, 258
- B26. "LGS AO Science Impact: Present and Future Prospects." Liu, M. 2008, *Proceedings of the SPIE* (Marseilles), 7015, 3

- B25. "Performance of the Near-Infrared Coronagraphic Imager on Gemini-South." Chun, M. et al. (10 authors) 2008, *Proceedings of the SPIE* (Marseilles), 7015, 49
- B24. "Suppressing Speckle Noise and Retrieving Faint Companions: Data Analysis Techniques for the Near-Infrared Coronagraphic Imager." Biller, B. et al. (10 authors) 2008, *Proceedings of the SPIE* (Marseilles), 7015, 184
- B23. "NICI: Combining ADI, SDI, and Coronagraphy." Artigau, E. et al. (12 authors) 2008, *Proceedings of the SPIE* (Marseilles), 7014, 66
- B22. "Star Formation: Answering Fundamental Questions During the Spitzer Warm Mission Phase." Strom, S., Allen, L., Carpenter, J., Hartmann, L., Megeath, S. T., Rebull, L., Stauffer, J. R., & Liu, M. 2007. *The Science Opportunities of the Warm Spitzer Mission Workshop*, 943, 137-156
- B21. "The Extended Solar Neighborhood: Precision Astrometry from the Pan-STARRS-1 3π Survey." Magnier, E., Liu, M., Monet, D., & Chambers, K. 2007, *Proceedings of IAU Symposium 248: A Giant Step: From Milli- to Micro-Arcsecond Astrometry* (eds. W. J. Jin, I. Platais, & M. A. C. Perryman), 248, 553
- B20. "Mining the Next Generation of Surveys for Cool Star Science." Pinfield, D., Liu, M. C., Jones, H. R. A. et al. (12 authors), 2007, *Proceedings of Cool Stars 14* (ed. G. van Belle), ASP Conference Series, 384, 364
- B19. "Disks around Brown Dwarfs and Cool Stars." Apai, D., Luhman, K. & Liu, M. C. 2007, *Proceedings of Cool Stars 14* (ed. G. van Belle), ASP Conference Series, 384, 383
- B18. "Astronomical Science from Laser Guide Star Adaptive Optics: A Brief History, A Current Snapshot, and a Bright Future." Liu, M. C. 2006, *Proc. of the SPIE volume 6272: Advances in Adaptive Optics II*, 6272, 14
- B17. "Design of the TMT Mid-Infrared Echelle: Science Drivers and Design Overview." Elias, J. et al. 2006, *Proc. of the SPIE volume 6269: Ground-Based and Airborne Instrumentation for Astronomy*, 122
- B16. "Near-IR Surface Brightness Fluctuations and Optical Colours of Magellanic Star Clusters." Gonzalez, R. A., Albaran, M. Y., Mouhcine, M., Liu, M. C., Bruzual, G., & Batz, B. 2005, in *Resolved Stellar Populations* (ASP Conf. Series), ed. D. Valls-Gabaud & M. Chavez, in press
- B15. "Dust around the Nearest Young Stars: The Disk around the Young M Dwarf GJ 803 (AU Mic)." Liu, M. C., Matthews, B., Kalas, P., & Wililams, J. 2004, in *Dust Disks and the Formation, Evolution, and Detection of Habitable Planets*, in press
- B14. "Properties of Circum(sub)stellar Accretion Disks." Liu, M. C., Tokunaga, A. T., & Najita, J. 2003, in *Scientific Frontiers in Research on Extrasolar Planets* (ASP Conf. Proc.), 294, 243
- B13. "Disks Around Young Brown Dwarfs." Liu, M. C. 2002, in *Proceedings of IAU 211: Brown Dwarfs*, ed. E. Martín, in press

- B12. “CLOUDS: Continuous Observations of Ultra-cool DwarfS.” Goldman, B. et al. 2002, in *Proceedings of IAU 211: Brown Dwarfs*, ed. E. Martín, in press
- B11. “Near-IR SBFs as Diagnostics of Unresolved Stellar Populations.” González L., R. A. & Liu, M. C. 2002, in *Science with the GTC*, in press
- B10. “Subaru IR Spectroscopy of Candidate Young Brown Dwarfs and Planetary-Mass Objects in IC 348.” Liu, M. C. 2001, in *The Future of Cool-Star Astrophysics: 12th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun*, eds. A. Brown, G. M. Harper & T. Ayers, 12, 141
- B9. “Discovery of a New Multiple Gravitationally Lensed QSO.” Wisotzki, L., Christlieb, N., Liu, M. C., Maza, J., Morgan, N. D., & Schechter, P. L. 2001, in *Gravitational Lensing: Recent Progress and Future Goals*, eds. T. G. Brainerd & C. S. Kochanek (ASP Conf. Series), 237, 63
- B8. “Ages of Early-Type Galaxies from Infrared Surface Brightness Fluctuations.” Jensen, J. B., Tonry, J. L., Barris, B. J., & Liu, M. C. 2001 in *Astrophysical Ages and Timescales*, eds. T. von Hippel, N. Manset & C. Simpson (ASP Conf. Series), in press
- B7. “An Adaptive Optics Survey for Companions to Stars with Extra-Solar Planets.” Lloyd, J. P., Liu, M. C., Graham, J. R. et al. (15 authors) 2000, in *Planetary Systems in the Universe: Observation, Formation, and Evolution*, eds. A. J. Penny, P. Artymowicz, A.-M. Lagrange, & S. S. Russell (ASP Conf. Series), in press
- B6. “IRCAL — The Near-Infrared Camera for Adaptive Optics at Lick Observatory.” Lloyd, J. P., Liu, M. C., Macintosh, B. A., Sevenson, S. A., Deich, W. T. S., & Graham, J. R. 2000, in *Astronomical Telescopes and Instrumentation 2000* (Proc. SPIE), 4008, 814
- B5. “Calibration of Near-IR Surface Brightness Fluctuations for Cosmological Distance Measurements.” Liu, M. C., Graham, J. R., & Charlot, S. 1999, in *Cosmic Flows: Towards an Understanding of Large-Scale Structure*, eds. S. Courteau, M. Strauss, & J. Willick (ASP Conf. Series, Vol. 201), 142
- B4. “Extremely Red Galaxies in the Field of QSO 1213–0017: A Galaxy Concentration at $z = 1.31$.” Liu, M. C., Dey, A., Graham, J. R., Steidel, C. C., & Adelberger, K. 1999, in *The Hy-Redshift Universe: Galaxy Formation and Evolution at High-Redshift*, eds. A. J. Bunker & W. J. M. van Breugel (ASP Conf. Series, Vol. 193), 344 (astro-ph/9910434)
- B3. “The Nature of the Red Giant Branch Population of NGC 5128 with NICMOS on the Hubble Space Telescope.” Marleau, F. R., Graham, J. R., Charlot, S. & Liu, M. 1999, in *Galaxy Dynamics: From the Early Universe to the Present*, eds. F. Combes, G. A. Mamon, & V. Charmandaris (ASP Conf. Series, Vol. 197), 265
- B2. “Stellar Populations of Elliptical Galaxies from Surface Brightness Fluctuations.” Liu, M. C., Charlot, S., & Graham, J. R. 1999, in *Spectrophotometric Dating of Stars and Galaxies*, eds. I. Hubeny, S. Heap, & R. Cornett (ASP Conf. Series, Vol. 192), 311 (astro-ph/9905190)

- B1. “Weighing the Stellar Content of NGC 5907’s Dark Matter Halo.”
Liu, M. C., Marleau, F. R., Graham, J. R., Charlot, S., Sackett, P., & Zepf, S. 1999, in *Proceedings of the 19th Texas Symposium on Relativistic Astrophysics*, eds. J. Paul, T. Montmerle, & E. Aubourg (Paris, Dec 1998)

C. Invited Scientific Talks and Colloquia (incomplete)

- C49. Bay Area exoplanet workshop (Mountain View, CA), June 2015
- C48. Stanford University colloquium, June 2015
- C47. Lyot Meeting (Montreal), June 2015
- C46. IAU Symposium: *Young Stars and Planets Near Earth* (Atlanta, GA), May 2015
- C45. University of Hawaii IfA colloquium, Aug 2013
- C44. Subaru colloquium, June 2013
- C43. UCLA colloquium, May 2013
- C42. Caltech colloquium, June 2011
- C41. Harvard-Smithsonian Center for Astrophysics colloquium, May 2011
- C40. Cool Stars 16, Ultracool Dwarf Sciences from Wide-field Multi-Epoch Surveys (Seattle, WA), Sept 2010
- C39. AAS Meeting, Science with Adaptive Optics, May 2009
- C38. Subaru Observatory Conference, *Exoplanets and Disks: Their Formation and Diversity* (Kona, HI), March 2009
- C37. SPIE Meeting, Advances in Adaptive Optics (Marseilles), June 2008
- C36. AAS Meeting, Cool Brown Dwarfs and Hot Exoplanets, May 2007
- C35. AAS Meeting, Science from Wide-Field Surveys, May 2007
- C34. Harvard-Smithsonian Center for Astrophysics, April 2007
- C33. Caltech colloquium, April 2007
- C32. Cool Stars 14, Disks around Brown Dwarfs and Cool Stars, Nov 2006
- C31. American Museum of Natural History (New York, NY), July 2006
- C30. University of Florida, May 2006
- C29. National Central University (Taoyuan, Taiwan), August 2005
- C28. Academia Sinica Institute of Astronomy and Astrophysics (Taipei, Taiwan), August 2005

- C27. National Astronomical Observatory of Japan (Tokyo, Japan) August 2005
- C26. Institute of Space and Astronomical Science (Sagamihara, Japan), August 2005
- C25. University of Colorado, Boulder, February 2005
- C24. Space Telescope Science Institute (Baltimore, MD), October 2004
- C23. Carnegie Institution, Dept of Terrestrial Magnetism (Washington, DC), October 2004
- C22. University of California, Los Angeles, March 2004
- C21. American Astronomical Society Meeting (Atlanta, GA), January 2004
- C20. *Facing the Future: Formation and Evolution of Planets* (Austin, TX), October 2003
- C19. European Southern Observatory Headquarters (Garching, Germany), October 2003
- C18. *Stellar Populations 2003* (Garching, Germany), October 2003
- C17. University of California, Santa Cruz, May 2003
- C16. Cornell University (Ithaca, NY), April 2003
- C15. Lawrence Livermore National Lab (Livermore, CA), April 2003
- C14. University of California, Berkeley, April 2003
- C13. Hubble Fellows Symposium (Baltimore, MD), March 2003
- C12. Carnegie Institution, Dept of Terrestrial Magnetism (Washington, DC), March 2003
- C11. University of California, Santa Barbara, February 2003
- C10. Universidad de Chile (Santiago, Chile), January 2003
- C9. Infrared Processing and Analysis Center (IPAC; Pasadena, CA), November 2002
- C8. Cerro Tololo Interamerican Observatory (La Serena, Chile), July 2002
- C7. Academia Sinica Institute of Astronomy and Astrophysics (Taipei, Taiwan), March 2002
- C6. Joint Astronomy Centre (Hilo, HI), October 2001
- C5. Yale University (New Haven, CT) May 2001
- C4. Infrared Processing and Analysis Center (IPAC; Pasadena, CA), December 2000
- C3. European Southern Observatory (Garching, Germany), January 2000
- C2. Observatories of the Carnegie Institution of Washington (Pasadena, CA), January 2000
- C1. Academia Sinica Institute of Astronomy and Astrophysics (Taipei, Taiwan), March 1996

D. Public Talks and Presentations (incomplete)

- D21. “Rogue Planets”
BBC TV, Universe Live, January 2016
- D20. “Exoplanets and SETI”
Voice of America (Washington, DC), July 2013
- D19. “Exoplanet Cornucopia”
ARCS (Achievement Rewards for College Scientists) annual meeting (Honolulu), May 2013
- D18. “Brown Dwarfs”
Keck Observatory 20th anniversary (Hawaii), March 2013
- D17. “The Keck Telescope”
Island Issues, KKOA 107.7/LAVA 105.3 FM (Hawaii), March 2012
- D16. “Exoplanet Cornucopia”
Honolulu Rotary Club, Dec 2011
- D15. “Telescopes as Time Machines”
TEDx Honolulu, November 2011
- D14. “Exoplanet Cornucopia”
Friends of Hawai’i Astronomy, June 2011
- D13. “Seeing the Invisible”
Evenings with Astronomers, Keck Observatory fund-raising lecture series, Kona, HI, Jan 2010
- D12. “The Universe: Birth and Death of a Star”
The History Channel, August 2007
- D11. “Where Do Planets Come From?”
Keck Observatory Headquarters, July 2007
- D10. “Hitchhiker’s Guide to the End of the Universe”
University of Hawaii, Manoa, Oct 2005 (and Hilo and Maui)
- D9. “Worlds Around Other Stars” Keck Observatory Headquarters, Dec 2003
- D8. “Extrasolar Planets”
The Manoa Forum, University of Hawaii, Sept 2003
- D7. “Extrasolar Planets”
National Public Radio, Science Friday, Sept 2002
- D6. “Searching for Brown Dwarfs and Young Planets Using Adaptive Optics”
TOPS (Toward Other Planetary Systems) presentation, University of Hawai’i, June 2002

- D5. “Extrasolar Planets and Brown Dwarfs”
AstroDay 2K2, Hilo, Hawai’i, April 2002
- D4. “Worlds Around Other Stars: New Sharp Views from Mauna Kea”
Inaugural Frontiers of Astronomy community lecture, University of Hawai’i, Feb 2002
- D3. “A Brown Dwarf Companion Around a Sun-Like Star”
Friends of Hawai’i Astronomy, University of Hawaii, Feb 2002
- D2. “New Telescopes and Telescope Technology”
National Public Radio, Science Friday, Jan 2002
- D1. “With a Clear Sky, You Can See Forever: Adaptive Optics in Astronomy”
Morrison Planetarium, San Francisco Amateur Astronomers, July 1998

E. Books Reviewed

- E1. *Magnificent Universe*.
K. Croswell 1999, Simon & Schuster (New York).

F. Abstracts, Posters, and Circulars

Available upon request.