

Martha L. Boyer

Information

Institution **Space Telescope Science Institute**
Position Support Scientist, NIRCcam Deputy Branch Manager
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Education

The University of Minnesota, Minneapolis, MN USA
Dec 2008 Ph.D., Astrophysics
Thesis: Mass Loss in Metal-Poor AGB Stars
Advisers: Drs. Evan Skillman, Robert Gehrz, & Charles Woodward
June 2006 M.S., Astrophysics
Dec 2003 B.S., Physics and B.S., Astrophysics

Research Interests

Specialization Evolved stars, dust, nearby galaxies, resolved stellar populations, Magellanic Clouds, Local Group, M31, globular clusters, optical to mid-IR imaging, photometry, and spectroscopy

Summary My research centers on the role evolved stars play in galaxies, especially Asymptotic Giant Branch (AGB), Red Giant Branch (RGB), and Red Supergiant (RSG) stars. While our collective understanding of the final stages of stellar evolution has advanced considerably over the last decade, many questions and controversies remain. Progress requires building statistical samples of resolved stars in nearby galaxies with heretofore unexplored environmental properties. I combine *Spitzer* and *Hubble* imaging of nearby galaxies out to the edge of the Local Volume to study the metallicity influence on the optical and infrared properties of these important stellar phases.

Functional Interests

Specialization JWST/NIRCcam, Management, Calibration, Operations, Commissioning, SIAF, User Support

Summary I am the deputy manager of the JWST/NIRCcam Branch. Aside from management, I focus on Operations, Commissioning, and Calibration. I am the NIRCcam SIAF Lead, Cycle 1 Calibration lead, and Commissioning deputy (which includes overseeing support for MOC activities). I am the NIRCcam representative on the Absolute Flux, Astrometry, and SIAF working groups for JWST.

Recent Research Appointments

- 2016–present **Space Telescope Science Institute (STScI)**, Baltimore, MD USA
Position: Support Scientist, JWST/NIRCam Deputy Branch Manager
- 2015–2016 **University of Maryland**, College Park, MD USA
Position: Visiting Research Scientist
- 2012–2015 **NASA GSFC**, Greenbelt, MD USA
Position: James Webb Space Telescope Postdoctoral Fellow
Supervisor: Dr. George Sonneborn
- 2009–2012 **STScI**, Baltimore, MD USA
Position: Postdoctoral Researcher: Surveying the Agents of Galaxy Evolution
Supervisor: Dr. Karl Gordon

Teaching and Outreach Appointments

- Loyola University Maryland**, Baltimore, MD USA
- 2010–2012 Adjunct Faculty: Introductory Astronomy Lecture
- Towson University**, Towson, MD USA
- 2011 Adjunct Faculty: Introductory Astronomy Laboratory
- 2009–2012 Outreach: Astronomy Instructor for *Baltimore Project Astro*
- University of Minnesota**, Minneapolis, MN USA
- 2008 Lecturer: Introductory Astronomy
- 2006–2008 Outreach: Astronomy Department Outreach Director
- 2006 Teaching Assistant: Introductory Astronomy
- 2004 Teaching Assistant: Introductory Physics for Biology Majors

STScI Functional Roles and Working Groups (WGs)

- Role NIRCam Deputy Branch Manager
- Role NIRCam Cycle 1 Calibration Lead
- Role NIRCam SIAF Lead
- Role NIRCam Commissioning Deputy
- WG NIRCam Ops Working Group (NOWG) member
- WG Cycle 1 Calibration, NIRCam representative
- WG Absolute Flux Calibration, NIRCam representative
- WG Astrometric Calibration, NIRCam representative
- WG JWST SIAF, NIRCam representative
- WG JDox, NIRCam representative (2016-2017)
- WG MESA PPS Working Group (MPWG), NIRCam representative (2016-2017)

Primary Science Collaborations

DUSTINGS	PI: Boyer , <i>DUST in Nearby Galaxies with Spitzer</i>
JWST-ERS	PI: Weisz, <i>Stellar Populations and Proper Motions with JWST</i>
JWST-GTO	PI: Meixner, <i>Supernovae dust and Star Formation in the Magellanic Clouds</i>
Scylla	PI: Murray, <i>[Parallel program to ULLYSES - an HST UV Legacy Program]</i>
LUVIT	PI: Gilbert, <i>Local Ultra-Violet Imaging Treasury</i>
BEAST	PI: Gordon, <i>Bayesian Extinction And Stellar Tool</i>
STARKEY	PI: Marigo, <i>Solving the TP-AGB STAR Conundrum: a KEY to Galaxy Evolution</i>
PHAT	PI: Dalcanton, <i>Panchromatic Hubble Andromeda Treasury</i>
PHAT-M33	PI: Dalcanton, <i>Panchromatic Hubble Andromeda Treasury for M33</i>
NESS	PI: Scicluna, <i>Nearby Evolved Star Survey</i>
SPIRITS	PI: Kasliwal, <i>SPitzer InfraRed Intensive Transients Survey</i>
HTTP	PI: Sabbi, <i>Hubble Tarantula Treasury Program</i>
HERITAGE	PI: Meixner, <i>HERschel Inventory of the Agents of Galaxy Evolution</i>
SAGE	PIs: Meixner, Gordon, Kemper, <i>Surveying the Agents of Galaxy Evolution</i>

Mission Collaborations

NIRCam	I am a member of STScI's JWST/NIRCam Branch
WINGS	Lead co-I of a WFIRST Science Investigation Team (SIT): <i>WFIRST Infrared Nearby Galaxy Survey</i> , PI: Williams
LVM	Collaborator of an SDSS-V program: <i>The Local Volume Mapper</i> , an optical IFU spectroscopy survey, PI: Drory

Honors and Awards

2017	STScI Bonus Award for Outstanding Efforts (STScI)
2012–2015	James Webb Space Telescope Fellowship (NASA)
2008–2009	Dissertation Fellowship (University award)
2008	Aneesur Rahman Prize (Physics Department award)
2007–2008	Louise T. Dossall Fellowship (University award)
2003	Minnesota Space Grant Consortium Scholarship (State award)
2001–2003	Barry M. Goldwater National Scholarship (National award)
2001–2002	Institute of Technology Merit Scholarship (University award)
1999–2001	Phillips Family Scholarship (University award)
1999–2003	Presidential Scholarship (University award)

Observing Experience

Optical	Australian Astronomical Observatory: AAT/AAOmega
Optical	Magellan Observatory: Clay/MIKE
Optical	Hubble Space Telescope: ACS/WFC
Near-IR	Hubble Space Telescope: WFC3/IR
Near-IR	Gemini North: NIRI
Near-IR	Kitt Peak Observatory: WIYN/WHIRC
Near-IR	Mt. Graham Observatory: LBT/LUCIFER
Infrared	Spitzer Space Telescope: IRAC, IRS and MIPS
Sub-mm	Herschel Space Observatory: PACS

Academic Service

STScI Service and Committees

2018–present	STScI: Support Scientist Representative
2018–2019	STScI: Spring Symposium: The Lives and Deaths of Stars (SOC Chair)
2018–2019	STScI: STScI Prize Fellowship Committee (Giacconi/Exoplanet)
2018	STScI: JWST ERS Financial Review Panel
2017–2018	STScI: Spring Symposium: The 21 st Century H-R Diagram (SOC)
2017	STScI: JWST Proposal Planning Workshop, Madrid (SOC)
2017 & 2018	STScI: Science Evaluation Committee (SEC)
2011	STScI: Mass Loss Return from Stars to Galaxies Workshop (SOC)
2010–2011	STScI: Committee for the HotSci@STScI/CoolSci@STScI talk series (SOC)

Other Committees

2019	Postgraduate Advisory Committee (Etsegenet Elemu), external member, SAAO
2018–present	IAU Symposium: The Origin of Outflows in Evolved Stars (SOC)
2019	Caltech: Exploring the Galaxy and the Local Group with WFIRST (SOC)
2016–2019	Mikulski Archive for Space Telescopes Users Group, MUGS
2016–2018	IAU Symposium: Why Galaxies Care about AGB Stars IV (SOC)
2015–2016	Uppsala University: Cool Stars 19, Special Session on AGB Stars (SOC)
2014–2015	Observatoire de la Côte d'Azur: A Nice Workshop on AGB Stars (SOC)
2008	University of Minnesota: External department review, internal committee

Proposal Reviews (panels & external reviewer)

ALMA Review Panel (Deputy Panel Chair)
HST Review Panel
NASA ADAP Panel
NASA Postdoctoral Program (NPP), Reviewer
Chilean National Science and Technology Commission (CONICYT), Reviewer
The Swedish National Space Board (SNSB), Reviewer

Referee/Reviewer

Science, Astrophysical Journal (ApJ), Astronomy & Astrophysics (A&A), Monthly Notices of the Royal Astronomical Society (MNRAS), Publications of the Astronomical Society of the Pacific (PASP)

Awarded Grants and Proposals (PI | Science PI)

- 2019 Hubble Space Telescope/WFC3+ACS, 33 orbits + 7 parallel, \$325k
Uncovering the Cause of the Shift in Carbon Star Behaviour at High Metallicity
- 2018 NASA Astrophysical Data Analysis, 2 years, \$335k
The Dust Budget of M31: A Global Assessment of Dust Production in a Milky Way Analog
- 2016 Joint Spitzer and Hubble Space Telescope, \$39k
A Search for Stellar Dust Production in Leo P, a Nearby Analog of High Redshift Galaxies
- 2015 NASA Astrophysical Data Analysis, 3 years, \$447k
Stellar Dust Production in Chemically Primitive Environments
- 2015 Hubble Space Telescope/WFC3+ACS, 20 orbits + 20 parallel, \$120k
The Evolution of Metal-Rich Asymptotic Giant Branch Stars (PHAT follow up)
- 2015 Hubble Space Telescope/WFC3, 14 orbits, \$99k
Assessing the Impact of Metallicity on Stellar Dust Production (DUSTiNGS follow up)
- 2015 Gemini North/NIRI Fast Turn Around, 3.3 hours
AGB Star Dust Production at Extremely Low Metallicity (DUSTiNGS follow up)
- 2014 Spitzer Space Telescope/IRAC, 54 hours, \$10k
Lightcurves of the Dominant Dust Producers in Metal-poor Environments (DUSTiNGS follow up)
- 2012 NASA Astrophysical Data Analysis, 2 years, \$178k
Dust Production in the Local Group
- 2012 Hubble Space Telescope/WFC3, 1 orbit, \$33k
Towards Identifying Carbon Stars Beyond the Local Group
- 2011 Herschel Space Observatory/PACS, 11.7 hours, \$31k
Investigating the Origin of the Intercluster Medium in M15
- 2011 Spitzer Space Telescope/IRAC, 120 hours, \$81k
A Complete Census of Dusty Evolved Stars in Local Group Dwarf Galaxies (DUSTiNGS)
- 2010 Anglo-Australian Telescope/AAOmega, 3 hours
Uncovering the Nature of a New Branch of Anomalous AGB Stars in the SMC
- 2009 Large Binocular Telescope/LUCIFER, 7.5 hours
AGB Star Imaging in LG Dwarf Galaxies for Characterizing Galaxy Evolution
- 2008 Spitzer Space Telescope/IRS, 2.2 hours
Connecting the Dots: IRS 16- μ m Imaging of AGB Stars in Metal-poor LG Dwarf Galaxies

Recent Awarded Grants and Proposals (Co-I)

- 2019 Murray, et al., Hubble Space Telescope/WFC3
Scylla: A pure parallel program to the ULLYSES HST UV Legacy
- 2019 McQuinn, et al., Hubble Space Telescope/ACS
Calibrating the Tip of the Red Giant Branch Distance Indicator in the Near-Infrared
- 2019 Jones, et al. (Admin PI: **Boyer**), Hubble Space Telescope/WFC3
A First Measurement of the Global AGB Dust Budget in a Metal-Rich Galaxy
- 2019 Jones, et al., ALMA
The cold circumstellar envelopes of evolved stars in the Large Magellanic Cloud
- 2019 Schlawin, E., et al., Spitzer Space Telescope/IRAC
Imaging Faint Suns for Photometric Calibration
- 2014–2018 Kasliwal, et al., Spitzer Space Telescope/IRAC (renewed 3×)
SPIRITS: SPitzer InfraRed Intensive Transients Survey
- 2018 Sargent, et al., Spitzer Space Telescope/IRAC
Characterizing the Norma Overdensity
- 2017 Weisz, et al., JWST-ERS
The Resolved Stellar Populations Early Release Program
- 2017 Srinivasan, et al., ALMA
The nature of the enigmatic mid-infrared excess sources in the Large Magellanic Cloud
- 2017 Jones, et al., ALMA
The Cold Circumstellar Envelopes of Evolved Stars in the LMC
- 2016 Dalcanton, et al., Hubble Space Telescope/ACS+WFC3
A Legacy Imaging Survey of M33
- 2016 Sloan, et al., Spitzer Space Telescope/IRAC
Spitzer's last look at the Small Magellanic Cloud
- 2016 McDonald, et al., ALMA
The Stellar-Interstellar Border in Globular Clusters
- 2015 Williams, et al., WFIRST Science Investigation Team
WINGS: WFIRST Infrared Nearby Galaxies Survey
- 2014 Jones, et al., Spitzer Space Telescope/IRAC
Infrared Variables Stars in M32
- 2013 Groenewegen, et al., ALMA
The Life Cycle of Dust and Gas: CO Observations of AGB Stars in the LMC
- 2012 Sabbi, et al., Hubble Space Telescope/ACS+WFC3
Hubble Tarantula Treasury Project (HTTP: unraveling Tarantula's web)
- 2012 McDonald, et al., ALMA
The Outflows of Metal-poor Evolved Stars in 47 Tucanae
- 2012 Dwek, et al., NASA Astrophysical Data Analysis Program
The Origin and Evolution of Dust in the Magellanic Clouds

Invited Talks

- Dec 2019 Invited Review, WorkPlaNS II: Workshop for Planetary Nebula observations (Leiden)
- Apr 2019 Invited Talk, JWST All Hands (STScI)
- Aug 2018 Invited Review, IAU Symposium on AGB stars (Vienna)
- July 2017 Invited Talk, The Resolved Universe of Galaxies (Heidelberg)
- July 2017 Invited Talk, Surveys of the Great Andromeda Galaxy (Leiden)
- Mar 2017 Invited Review, The AGB-Supernovae Mass Transition (Rome)
- Jan 2017 Invited Talk, Star Formation in Nearby Galaxies with JWST (Caltech)
- Feb 2016 Colloquium, University of Texas, Austin
- Nov 2015 Invited Seminar, Harvard-Smithsonian Center for Astrophysics
- Oct 2015 Invited Seminar, Royal Observatory of Edinburgh
- Oct 2015 Invited Review, Feedback in the Magellanic Clouds Workshop (STScI)
- June 2015 Invited Review, European Week of Astronomy and Space Science (Tenerife)
- Oct 2014 Colloquium, STScI
- Nov 2013 Colloquium, Academia Sinica Institute of Astronomy and Astrophysics (Taipei)
- Apr 2013 Colloquium, Cornell University
- Apr 2013 Colloquium, Rochester Institute of Technology
- Nov 2012 Colloquium, University of Minnesota
- Oct 2012 Colloquium, University of Delaware
- June 2012 Invited Review, Cool Stars 17 (Barcelona)
- Dec 2011 Colloquium, University of Wisconsin
- July 2009 Post-Doc Colloquium, STScI
- Apr 2009 Colloquium, Gemini South

Other Conference/Series Talks

- May 2019 A Richer Universe (Vancouver)
- Jul 2018 HotSci@STScI Talk Series, STScI
- Oct 2016 Exploring the Universe with JWST II (Montreal)
- May 2015 A Nice Workshop on AGB Stars (Nice)
- Aug 2014 Why Galaxies Care About AGB Stars III (Vienna)
- Nov 2013 The Life Cycle of Dust in the Universe (Taipei)
- June 2013 Planning the Future: Evolved Stars, Mass Loss, and Dust Production (Cornell)
- Aug 2011 Physical & Chemical Aspects of the Late Stages of Stellar Evolution (Warsaw)
- Oct 2010 WittFest: Origins and Evolution of Dust (U Toledo)
- Aug 2010 Why Galaxies Care About AGB Stars II (Vienna)
- July 2010 HotSci@STScI Talk Series, STScI
- May 2010 Herschel First Results (ESTEC)

Summary: I have published 82 refereed papers, >3000 total refereed citations, and an *H*-index of 34. Papers with >25, >50, and >100 citations are marked with 1, 2, or 3 asterisks, respectively.

First-Authored Refereed Publications

15. **Boyer, M. L.**, Williams, et al. 2019, ApJ, 879, 109
A Dramatic Decrease in Carbon Star Formation in M31
14. **Boyer, M. L.**, McQuinn, et al. 2017, ApJ, 851, 152
An Infrared Census of Dust in Nearby Galaxies With Spitzer (DUSTiNGS). IV. Discovery of High-Redshift AGB Analogs
- * 13. **Boyer, M. L.**, McDonald, I., et al. 2015, ApJ, 810, 116
Identification of a Class of AGB Stars Struggling to Become Carbon Stars in the Magellanic Clouds
- * 12. **Boyer, M. L.**, McQuinn, K. B. W., et al. 2015, ApJ, 800, 51
An Infrared Census of DUST in Nearby Galaxies with Spitzer (DUSTiNGS), II. Discovery of Metal-poor Dusty AGB Stars
- * 11. **Boyer, M. L.**, McQuinn, K. B. W., et al. 2015, ApJS, 216, 10
An Infrared Census of DUST in Nearby Galaxies with Spitzer (DUSTiNGS), I. Overview
- * 10. **Boyer, M. L.**, Girardi, L., Marigo, P., et al. 2013, ApJ, 774, 83
Is There a Metallicity Ceiling to Form Carbon Stars? - A Novel Technique Reveals a Scarcity of C Stars in the Inner M31 Disk
9. **Boyer, M. L.** 2013, AN, 334, 124
Dust Production and Mass Loss in Cool Evolved Stars
- ** 8. **Boyer, M. L.**, Srinivasan, S., Riebel, D., McDonald, I., et al. 2012, ApJ, 748, 40
The Dust Budget of the SMC: Are AGB Stars the Primary Dust Source at Low Metallicity?
- *** 7. **Boyer, M. L.**, Srinivasan, S., van Loon, J. Th., et al. 2011, AJ, 142, 103
Surveying the Agents of Galaxy Evolution in the Tidally Stripped, Low Metallicity Small Magellanic Cloud (SAGE-SMC). II. Cool Evolved Stars
- * 6. **Boyer, M. L.**, Sargent, B., van Loon, J. Th., et al. 2010, A&A, 518, L142
Cold Dust in Three Massive Evolved Stars in the LMC
- * 5. **Boyer, M. L.**, van Loon, J. Th., McDonald, I., et al. 2010, ApJL, 711, 99
Is Dust Forming on the Red Giant Branch in 47 Tuc?
- * 4. **Boyer, M. L.**, McDonald, I., van Loon, J. Th., et al. 2009, ApJ, 705, 746
Dust Production and Mass Loss in the Galactic Globular Cluster NGC 362
- ** 3. **Boyer, M. L.**, Skillman, E. D., et al. 2009, ApJ, 697, 1993
A Spitzer Study of Asymptotic Giant Branch Stars. III. Dust Production and Gas Return in Local Group Dwarf Irregular Galaxies
- * 2. **Boyer, M. L.**, McDonald, I., van Loon, J. Th., et al, 2008, AJ, 135, 1395
A Spitzer Space Telescope Atlas of ω Centauri: The Stellar Population, Mass Loss, and the Intra-cluster Medium
- ** 1. **Boyer, M. L.**, Woodward, C. E., van Loon, J. Th., et al. 2006, AJ, 132, 1415
Stellar Populations and Mass Loss in M15: A Spitzer Space Telescope Detection of Dust in the Intracluster Medium

Other Refereed Publications

67. Goldman, S. R., **Boyer, M. L.**, et al. 2019, ApJ, in press
AGB Stars in the Nearby Dwarf Galaxy Leo P
66. Britavskiy, N., Bonanos, A. Z., Herrero, A., Cervino, M., García-Álvarez, D., **Boyer, M. L.**, et al. 2019, A&A, in press
Physical Parameters of Red Supergiants in Dwarf Irregular GALaxies in the Local Group
65. Dharmawardena, T. E. Kemper, F., and 25 additional coauthors including **Boyer, M. L.** 2019, MNRAS, 489, 3218
The Nearby Evolved Stars Survey: I. JCMT/SCUBA-2 Sub-millimetre Detection of the Detached Shell of U Antilae
64. Karambelkar, V., R., Adams, S., M., Whitelock, P. A., Kasliwal, M., M., Jencson, J. E., **Boyer, M. L.**, et al. 2019, ApJ, 877, 110
SPIRITS Catalog of Infrared Variables: Identification of Extremely Luminous Long Period Variables
63. McQuinn, K. B. W., **Boyer, M. L.**, Skillman, E. D., & Dolphin, A. E. 2019, ApJ, 880, 63
Using the Tip of the Red Giant Branch as a Distance Indicator in the Near Infrared
62. Nanni, A., Groenewegen, M. A. T., and 6 additional coauthors including **Boyer, M. L.**, et al. 2019, MNRAS, 487, 502
The Mass-loss, Expansion Velocities and Dust Production Rates of Carbon Stars in the Magellanic Clouds
61. Pastorelli, G., Girardi, L., and 17 additional coauthors including **Boyer, M. L.**, et al. 2019, MNRAS, 485, 5666
Constraining the Thermally Pulsing Asymptotic Giant Branch Phase with Resolved Stellar Populations in the Small Magellanic Cloud
60. Goldman, S. R., **Boyer, M. L.**, et al. 2019, ApJ, 877, 49
An Infrared Census of Dust in Nearby Galaxies with Spitzer (DUSTiNGS): V. The Period-luminosity Relation for Dusty Metal-Poor AGB Stars
59. McDonald, I., **Boyer, M. L.**, et al. 2019, MNRAS, 484, 85
Circumstellar CO in Metal-poor Stellar Winds: the Highly Irradiated Globular Cluster Star 47 Tucanae V3
58. Sewiło, M., Whitney, B., and 15 additional coauthors including **Boyer, M. L.** 2019, ApJS, 240, 26
Identifying Young Stellar Objects in the Outer Galaxy: I = 244 deg Region in Canis Major
57. Kwan, S., Lau, R. M., Jencson, J., Kasliwal, M., **Boyer, M. L.**, Ofek, E., Masci, F., & Laher, R. 2018, ApJ, 856, 38
An Optical and Infrared Time-domain Study of the Supergiant Fast X-Ray Transient Candidate IC 10 X-2
56. Jones, O. C., Maclay, M. T., **Boyer, M. L.**, et al. 2018, ApJ, 854, 117
Near-Infrared Stellar Populations in the Metal-poor, Dwarf Irregular Galaxies Sextans A and Leo A
55. Jones, O. C., Woods, P. M., Kemper, F., et al. 2017, MNRAS, 470, 3250
The SAGE-Spec Spitzer Legacy Program: The Life-cycle of Dust and Gas in the Large Magellanic Cloud. Point Source Classification -III
54. McQuinn, K., **Boyer, M. L.**, et al. 2017, ApJ, 834, 78
DUSTiNGS III. Distribution of Intermediate-Age and Old Stellar Populations in Disks and Outer Extremities of Dwarf Galaxies

- * 53. Kasliwal, M., Bally, J., Masci, F., **et al.** 2017, ApJ, 839, 88
SPIRITS: Uncovering Unusual Infrared Transients with Spitzer
52. Groenewegen, M. A. T., Vlemmings, W., Marigo, P., **et al.** 2016, A&A, 462, 2995
The ALMA Detection of CO Rotational Line Emission in AGB Stars in the Large Magellanic Cloud
51. Matsuura, M., Sargent, B., Yates, J., **et al.** 2016, MNRAS, 462, 2995
The Mass-Loss or Red Supergiants at Low Metallicity: Detection of Rotational CO Emission from Two Red Supergiants in the Large Magellanic Cloud
50. Hamren, K., Beaton, R. L., Guhathakurta, P., Gilbert, K., Tollerud, E., **Boyer, M. L.**, et al. 2016, ApJ, 828, 15
Carbon Stars in the Satellites and Halo of M31
49. Dell'Agli, F., Di Criscienzo, M., **Boyer, M. L.**, & García-Hernández, D. A. 2016, MNRAS, 460, 4230
Evolved Stars in the Local Group Galaxies - I. AGB Evolution and Dust Production in IC 1613
48. Gordon, K. D., Foesneau, M., Arab, H., **et al.** 2016, ApJ, 826, 104
The Panchromatic Hubble Andromeda Treasury XV. The BEAST: Bayesian Extinction and Stellar Tool
47. Sloan, G. C., Kraemer, K. E., McDonald I., **et al.** 2016, ApJ, 826, 44
The Infrared Spectral Properties of Magellanic Carbon Stars
46. Srinivasan, S., **Boyer, M. L.**, Kemper, F., et al. 2016, MNRAS, 457, 2814
The Evolved-star Dust Budget of the Small Magellanic Cloud: the Critical Role of a Few Key Players
45. Ventura, P., Karakas, A. I., Dell'Agli, F., García-Hernández, D., A., **Boyer, M. L.**, Di Criscienzo, M. 2016, MNRAS, 457, 1456
On the Nature of the Most Obscured C-rich AGB stars in the Magellanic Clouds
- * 44. Sabbi, E., Lennon, D. J., Anderson, J., **et al.** 2016, ApJS, 222, 11
Hubble Tarantula Treasury Project III. Photometric Catalog and Resulting Constraints on the Progression of Star Formation in the 30 Doradus Region
43. Fox, O., Johansson, J., Kasliwal, M., Andrews, J., Bally, J., Bond, H., **Boyer, M. L.**, et al. 2016, ApJL, 816, 13
An Excess of Mid-Infrared Emission from the Type Iax SN 2014dt
42. Britavskiy, N. E., Bonanos, A. Z., Mehner, A., **Boyer, M. L.**, and McQuinn, K. 2015, A&A, 584, 33
Identification of Dusty Massive Stars in Star-Forming Dwarf Irregular Galaxies in the Local Group with Mid-IR Photometry
41. Jones, O., Meixner, M., Sargent, B., **Boyer, M. L.**, et al. 2015, ApJ, 811, 145
The Dustiest Post-Main-Sequence Stars in the Magellanic Clouds
40. McDonald, I., Zijlstra, A., Lagadec, E., Sloan, G. C., **Boyer, M. L.**, et al. 2015, MNRAS, 453, 4324
ALMA Reveals Sunburn: CO Dissociation Around AGB Stars in the Globular Cluster 47 Tuc
39. Hamren, K., Rockosi, C., Guhathakurta, P., **Boyer, M. L.**, et al. 2015, ApJ, 810, 60
A Spectroscopic and Photometric Exploration of the C/M Ratio in the Disk of M31
38. Riebel, D., **Boyer, M. L.**, et al. 2015, ApJ, 807, 1
SAGE-Var: An Infrared Survey of Variability in the Magellanic Clouds

- * 37. Ventura, P., Karakas, A., Dell'Agli, F., **Boyer, M. L.**, et al. 2016, MNRAS, 450, 3181
The Large Magellanic Cloud as a Laboratory for Hot Bottom Burning in Massive AGB Stars
- * 36. Ruffle, P., Kemper, F., Jones, O., **et al.** 2015, MNRAS, 451, 3504
Spitzer Infrared Spectrograph Point Source Classification in the Small Magellanic Cloud
- * 35. Weisz, D., Johnson, L., Foreman-Mackey, D., **et al.** 2015, ApJ, 806, 198
The High-Mass Stellar Initial Mass Function in M31 Clusters
34. Williams, B., Dalcanton, J., Dolphin, A., Weisz, D., Lewis, A., Lang, D., Bell, E., **Boyer, M. L.**, et al. 2015, ApJ, 806, 48
A Global Star-Forming Episode in M31 2–4 Gyr Ago
- * 33. Temim, T., Dwek, E., Tchernyshyov, K., **Boyer, M. L.**, Meixner, M., & Gall, C. 2015, ApJ, 799, 158
Dust Destruction Rates and Lifetimes in the Magellanic Clouds
- ** 32. Gordon, K., Roman-Duval, J., Bot, Caroline, **et al.** 2014, ApJ, 797, 85
Dust and Gas in the Magellanic Clouds from the HERITAGE Herschel Key Project. I., Dust Properties and Insights into the Origin of the Sub-mm Excess Emission
31. Jones, O. C., McDonald, I., Rich, R. M., Kemper, F., **Boyer, M. L.**, Zijlstra, A. A., & Bendo, G. J. 2014, MNRAS, 446, 1584
A Spitzer Space Telescope Survey of Extreme Asymptotic Giant Branch Stars in M32
- * 30. Seale, J., Meixner, M., Sewilo, M., Babler, B., **et al.** 2014, ApJ, 148, 124
HERschel Key Program HERITAGE: A Far-IR Source Catalog for the Magellanic Clouds
- ** 29. Meixner, M., Panuzzo, P., Roman-Duval, J., **et al.** 2013, AJ, 146, 62
The HERSCHEL Inventory of the Agents of Galaxy Evolution in the Magellanic Clouds, a Herschel Open Time Key Program
- * 28. Sabbi, E., Anderson, J., Lennon, D., van der Marel, R., Aloisi, A., **Boyer, M. L.**, et al. 2013, AJ, 146, 53
Hubble Tarantula Treasury Project: Unraveling Tarantula's Web. I. Observational Overview and First Results
27. Melbourne, J. & **Boyer, M. L.** 2013, ApJ, 764, 30
The Contribution of Thermally-pulsing AGB and RSG Stars to the Luminosities of the Magellanic Clouds at 1–24 microns
- * 26. Jones, O. C., Kemper, F., Sargent, B. A., McDonald, I., Gielen, C., Woods, P. M., Sloan, G. C., **Boyer, M. L.**, et al. 2012, MNRAS, 427, 3209
On the Metallicity Dependence of Crystalline Silicates in Oxygen-rich AGB Stars and Red Supergiants
- *** 25. McDonald, I., Zijlstra, A. A., & **Boyer, M. L.** 2012, MNRAS, 427, 343
Fundamental Parameters and Infrared Excesses of Hipparcos Stars
- *** 24. Dalcanton, J. J., Williams, B. F., Lang, D., Lauer, T. R., Kalirai, J. S., **et al.** 2012, ApJS, 200, 18
The Panchromatic Hubble Andromeda Treasury
- ** 23. Melbourne, J., Williams, B. F., Dalcanton, J. J., Rosenfield, P., Girardi, L., Marigo, P., Dolphin, A., **Boyer, M. L.**, Olsen, K., Skillman, E., & Seth, A. C. 2012, ApJ, 748, 47
The Contribution of TP-AGB and RHeB Stars to the Near-IR Luminosity of Local Galaxies: Implications for Stellar Mass Measurements of High Redshift Galaxies

- * 22. Dalcanton, J. J., Williams, B. F., Melbourne, J. L., Girardi, L., Dolphin, A., Rosenfield, P. A., **Boyer, M. L.**, et al. 2012, ApJS, 198, 6
Resolved Near-infrared Stellar Populations in Nearby Galaxies
- * 21. McDonald, I., van Loon, J. Th., Sloan, G., Dupree, A., Zijlstra, A., **Boyer, M. L.**, et al. 2011, MNRAS, 417, 20
Spitzer Spectra of Evolved Stars in ω Centauri and Their Low-Metallicity Dust Production
- *** 20. Gordon, K., Meixner, M., Meade, M., Whitney, B., Engelbracht, C., Bot, C., **Boyer, M. L.**, et al. 2011, AJ, 142, 102
Surveying the Agents of Galaxy Evolution in the Tidally Stripped, Low Metallicity Small Magellanic Cloud (SAGE-SMC). I. Overview
- ** 19. Olsen, K. A. G., Zaritsky, D., Blum, R. D., **Boyer, M. L.**, & Gordon, K. D. 2011, ApJ, 737, 29
A Population of Accreted Small Magellanic Cloud Stars in the Large Magellanic Cloud
- * 18. McDonald, I., **Boyer, M. L.**, van Loon, J. Th., & Zijlstra, A. 2011, ApJ, 730, 71
Dust Production and Mass Loss in the Galactic Globular Cluster 47 Tucanae
- * 17. McDonald, I., **Boyer, M. L.**, van Loon, J. Th., et al. 2011, ApJS, 193, 23
Fundamental Parameters, Integrated RGB Mass Loss and Dust Production in the Galactic Globular Cluster 47 Tucanae
- ** 16. Woods, Paul M., Oliveira, J. M., Kemper, F., van Loon, J. Th., et al. 2011, MNRAS, 411, 1597
The SAGE-Spec Spitzer Legacy Program: The Life-Cycle of Dust and Gas in the Large Magellanic Cloud. Point Source Classification I
- *** 15. Girardi, L., Williams, B., Gilbert, K., Rosenfield, P., Dalcanton, J., Marigo, P., **Boyer, M. L.**, et al. 2010, ApJ, 724, 1030
The ACS Nearby Galaxy Survey Treasury IX. Constraining Asymptotic Giant Branch Evolution With Old Metal-Poor Galaxies
14. Clayton, G. C., Sargent, B., **Boyer, M. L.**, et al. 2010, ApJ, 722, 1131
Herschel Observations of a Newly Discovered UX Ori Star in the LMC
13. McDonald, I., van Loon, J. Th., Dupree, A. K., & **Boyer, M. L.** 2010, MNRAS, 405, 1711
Discovery of Long-Period Variable Stars in the Very Metal-poor Globular Cluster M15
- *** 12. Meixner, M., Galliano, F., Hony, S., Roman-Duval, J., Robitaille, T., et al. 2010, A&A, 518, L71
HERschel Inventory of The Agents of Galaxy Evolution (HERITAGE): The LMC Dust
- ** 11. Kemper, F., Woods, P., M., Antoniou, V., Bernard, J.-P., Blum, R., **Boyer, M. L.**, et al. 2010, PASP, 122, 683
The SAGE-Spec Spitzer Legacy Program: The Life Cycle of Dust and Gas in the Large Magellanic Cloud
- ** 10. van Loon, J. Th., Oliveira, J., Gordon, K., Meixner, M., Shiao, B., **Boyer, M. L.**, et al. 2010, AJ, 139, 68
A Spitzer Space Telescope Far-Infrared Spectral Atlas of Compact Sources in the Magellanic Clouds. I. The Large Magellanic Cloud

- * 9. Oliveira, J., M., van Loon, J. Th., Chen, C.-H., R., Tielens, A. G. G. M., Sloan, G. C., Woods, Paul M., Kemper, F., Indebetouw, R., Gordon, K. D., **Boyer, M. L.**, et al. 2009, ApJ, 707, 1269
Ice Chemistry in Embedded Young Stellar Objects in the Large Magellanic Cloud
- ** 8. McDonald, I., van Loon, J. Th., Decin, L., **Boyer, M. L.**, Dupree, A. K., Evans, A., Gehrz, R. D., & Woodward, C. E. 2009, MNRAS, 394, 831
Giants in the Globular Cluster ω Centauri: Dust production, Mass Loss and Distance
- 7. Barmby, P., **Boyer, M. L.**, Woodward, C. E., Gehrz, R. D., van Loon, J. Th., Fazio, G., Marengo, M., & Polomski, E. 2009, AJ, 137, 207
A Spitzer Search for Cold Dust within Globular Clusters
- * 6. van Loon, J. Th., **Boyer, M. L.**, & McDonald, I. 2008, ApJL, 680, 49
Spitzer Space Telescope Evidence in NGC 6791: No Super Mass Loss at Supersolar Metallicity to Explain Helium White Dwarfs?
- * 5. van Loon, J. Th., van Leeuwen, F., Smalley, B., Smith, A. W., Lyons, N. A., McDonald, I., & **Boyer, M. L.** 2007, MNRAS, 382, 1353
A Spectral Atlas of Post-Main-Sequence Stars in Omega Centauri: Kinematics, Evolution, Enrichment and Interstellar Medium
- * 4. van Loon, J. Th., McDonald, I., Oliveira, J. M., Evans, A., **Boyer, M. L.**, Gehrz, R. D., Polomski, E., & Woodward, C. E. 2006, A&A, 450, 339
The First 8-13 μ m Spectra of Globular Cluster Red Giants: Circumstellar Silicate Dust Grains in 47 Tucanae (NGC 104)
- * 3. Jones, T. J., Woodward, C. E., **Boyer, M. L.**, Gehrz, R. D., & Polomski, E. 2005, ApJ, 620, 731
Spitzer IRAC Observations of Star Formation in N159 in the Large Magellanic Cloud
- ** 2. Kepler, S. O. **et al.** 2003, A&A, 401, 639
The Ever changing Pulsating White Dwarf GD358
- 1. Kepler, S. O. **et al.** 2003, BaltA, 12, 45
WET Observations of GD358 in 2000

Published Proceedings & Other Publications (Excluding Abstracts)

- 43. Gordon, K. D., Fouesneau, M., **et al.** 2019, Astrophysics Source Code Library, ascl:1908.013.BEAST
Bayesian Extinction And Stellar Tool
- 42. De Rosa, G., Oliveira, C., **et al.** 2019, arXiv:1907.04880
Increasing Gender Diversity and Inclusion in Scientific Committees and Related Activities at STScI
- 41. Meixner, M., **Boyer, M. L.**, et al. 2019, Astro2020: BAAS, 51, 554
Infrared Stellar Populations: Probing the Beginning and the End
- 40. De Beck, E., **Boyer, M. L.**, et al. 2019, Astro2020: BAAS, 51, 374
The fundamentals of outflows from evolved stars
- 39. Yoachim, P., Graham, M., **et al.** 2019, Astro2020: BAAS, 51, 303
LSST Narrowband Filters

38. Williams, B., Bell, E. F., **Boyer, M. L.**, et al. 2019, *Astro2020: BAAS*, 51, 301
Far Reaching Science with Resolved Stellar Populations in the 2020s
37. Rau, G., Montez, R., **et al.** 2019, *Astro2020: BAAS*, 51, 241
Cool, evolved stars: results, challenges, and promises for the next decade
36. Jencson, J. E., Kasliwal, M. M., **et al.** 2019, *ATel*, 12675
SPIRITS discoveries of 8 Infrared Transients and Eruptive Variables with Spitzer/IRAC
35. De Beck, E., **Boyer, M. L.**, et al. 2019, arXiv:1903.12025
Astro2020 Science White Paper: The fundamentals of outflows from evolved stars
34. Akeson, R., Armus, L., **et al.** 2019, arXiv:1902.05569
The Wide Field Infrared Survey Telescope: 100 Hubbles for the 2020s
33. **Boyer, M. L.** 2018, *IAU GA Symposium 343, Why Galaxies Care about AGB Stars IV.*, Vienna, Austria, ASPC, in press
The Impact of AGB Stars on Galaxies
32. Goldman, S., **Boyer, M. L.**, & Whitelock, P. 2018, *IAU GA Symposium 343, Why Galaxies Care about AGB Stars IV.*, Vienna, Austria, ASPC, in press
Infrared Lightcurves of Dusty and Metal-poor AGB Stars
31. Sargent, B., Srinivasan, S., **Boyer, M. L.**, et al. 2018, *IAU GA Symposium 343, Why Galaxies Care about AGB Stars IV.*, Vienna, Austria, ASPC, in press
Infrared Studies of the Variability and MAss Loss of some of the Dustiest AGB stars in the Magellanic Clouds
30. Hirschauer, A., **et al.** 2018, *IAU GA Symposium 343, Dwarf Galaxies: From the Deep Universe to the Present*, Vienna, Austria, ASPC, in press
The Lifecycle of Dust and Metals in the Low-Abundance Galaxies
29. Jencson, J. E., Kasliwal, M. M., **et al.** 2018, *ATel*, 12089
SPIRITS discovery of 4 Infrared Transients and Variables with Spitzer/IRAC
28. Jencson, J. E., Kasliwal, M. M., **et al.** 2018, *ATel*, 11575
Recent SPIRITS Discoveries of Infrared Transients and Variables with Spitzer/IRAC
27. **Boyer, M. L.** 2017, *MmSAI*, 88, 326
Observations of AGB and Super AGB Stars
26. Jencson, J. E., Kasliwal, M. M., **et al.** 2017, *ATel*, 10903
New SPIRITS Discoveries of Infrared Transients and Variables
25. Whitelock, P. A., Kasliwal, M., & **Boyer, M. L.** 2017, *European Physical Journal Web of Conferences*, 152, 01009
Spitzer Observations of Large Amplitude Variables in the LMC and IC 1613
24. Jencson, J. E., Kasliwal, M. M., **et al.** 2017, *ATel*, 10488
Recent Discoveries of Infrared Transients and Variables by SPIRITS
23. Jencson, J. E., Kasliwal, M. M., **et al.** 2017, *ATel*, 10172
Additional SPIRITS Discoveries of Infrared Transients and Variables without Counterparts in Reference Imaging
22. Jencson, J. E., Kasliwal, M. M., **et al.** 2017, *ATel*, 10171
Additional SPIRITS Discoveries of Infrared Transients and Variables with Counterparts in Reference Imaging

21. Whitelock, P. A., **Boyer, M. L.**, et al. 2016, 19th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun (CS19), 5
Mass Losing Asymptotic Giant Branch Stars and Supergiants
20. Jencson, J. E., Adams, S., Kasliwal, M. M., **et al.** 2016, ATel, 9434, 1
SPIRITS16tn: Spitzer Discovery of a Possible Supernova in Messier 108 at 8.8 Mpc
19. Jencson, J. E., Kasliwal, M. M., Tinyanont S., **et al.** 2016, ATel, 8940, 1
SPIRITS Discoveries of New Infrared Transients and Variables
18. Jencson, J. E., Kasliwal, M. M., Tinyanont S., **et al.** 2016, ATel, 8688, 1
SPIRITS Discoveries of Recent Infrared Transients with Spitzer Early Release Data
17. **Boyer, M. L.** 2016, European Week of Astronomy 2015, AGB Special Session, MmSAI, 87, 269
Observations of AGB Stars in Nearby Galaxies and Future Perspectives
16. **Boyer, M. L.**, McQuinn, K. B. W., et al. 2015, Why Galaxies Care About AGB Stars III: A Closer Look in Space and Time, Vienna, Austria, ASPC, 497, 453
DUSTINGS: An Infrared Census of Extreme AGB Stars in Nearby Dwarf Galaxies
15. **Boyer, M. L.**, Girardi, L., et al. 2015, Why Galaxies Care About AGB Stars III: A Closer Look in Space and Time, Vienna, Austria, ASPC, 497, 479
Where is the Metallicity Ceiling to From Carbon Stars?
14. Jencson, J. E., Kasliwal, M. M., Tinyanont S., **et al.** 2015, ATel, 7929, 1
SPIRITS Discoveries of Recent Infrared Transients with Spitzer Early Release Data
13. Matsuura, M., **et al.** 2015, IAU General Assembly, Meeting #29, IAUGA, 2245674
CO Thermal Emissions and Mass Loss of Red Supergiants Beyond the Milky Way
12. Tchernyshyov, K., Meixner, M., **et al.** 2015, Why Galaxies Care About AGB Stars III: A Closer Look in Space and Time, Vienna, Austria, ASPC, 497, 363
Evolution of Grains in the MAgellanic Clouds (ENiGMA)
11. Girardi, L., Beerman, L. C., **Boyer, M. L.**, et al. 2015, Why Galaxies Care About AGB Stars III: A Closer Look in Space and Time, Vienna, Austria, ASPC, 497, 413
TP-AGB Stars in M31: Results from PHAT
10. Sloan, G. C., Lagadec, E., Kraemer, K., **Boyer, M. L.**, et al. 2015, Why Galaxies Care About AGB Stars III: A Closer Look in Space and Time, Vienna, Austria, ASPC, 497, 429
Photometric Properties of Carbon Stars in the Small Magellanic Clouds
9. Olsen, K., Blum, R., Smart, B., Zaritsky, D., **Boyer, M. L.**, Gordon, K., & Massey, P. 2015, Fifty Years of Wide-Field Studies in the Southern Hemisphere: Resolved Stellar Population of the Bulge and Magellanic Clouds, La Serena, Chile, ASP, 491, 257
A Stellar Heist in the Magellanic Clouds
8. Bruzual, G., Charlot, S., **et al.** 2014, XIV Latin American REgional IAU Meeting Revista Mexicana de Astronomia y Astrofisica, RMxAC, 44, 74
TP-AGB Stars and Population Synthesis Models
7. Bruzual, G., Charlot, S., Lopezlira, R. G., Srinivasan, S., **Boyer, M. L.**, & Riebel, D. 2013, The Intriguing Life of Massive Galaxies, Proceedings of the International Astronomical Union, IAU Symposium, Volume 295, pp. 282

- The Luminosity Function of TP-AGB Stars in the LMC and SMC*
6. Meixner, M., Dwek, E., Temim, T., Tschernyshyov, K., **Boyer, M. L.**, & Gall, C. 2013, Proceedings of the Life Cycle of Dust in the Universe: Observations, Theory, and Laboratory Experiments (LCDU2013), Taipei, Taiwan, 17
Evolution of Grains in the Magellanic clouds (ENIGMA)
 5. McDonald, I., van Loon, J. Th., **Boyer, M. L.** 2012, EAS Publication Series, 56, 305
The Interplay Between Globular Clusters and the Halo and Disk
 4. **Boyer, M. L.**, Srinivasan, S., et al. 2011, Why Galaxies Care About AGB Stars II: Shining Examples and Common Inhabitants, Vienna, Austria, ASP, p. 473
AGB Stars in the Small Magellanic Cloud
 3. McDonald, I., van Loon, J. Th., & **Boyer, M. L.** 2009, American Institute of Physics Conference Series, 1094, 876
Metallicity, Pulsation and Mass Loss in Globular Cluster Low-mass AGB Stars
 2. Barmby, P., Marengo, M., van Loon, J. Th., Polomski, E., Fazio, G., Gehrz, R. D., Woodward, C. E., & **Boyer, M. L.** 2008, 37th COSPAR Scientific Assembly, 37, 191
The Elusive Intracluster Medium in Globular Clusters
 1. Polomski, E., Gehrz, R. D., Woodward, C. E., Humphreys, R. M., **Boyer, M. L.**, et al. 2006, The Spitzer Space Telescope: New Views of the Cosmos ASP Conference Series, 357, 196
Multi-Epoch Imaging and Spectroscopy of M33