

Elisabeth A.C. Mills | Research Assistant Professor

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Education

University of California, Los Angeles <i>Ph.D., Astronomy</i> Thesis: Extremes of Temperature and Density in Galactic Center Molecular Clouds Advisor: Mark R. Morris	Los Angeles, CA 2007–2013
Indiana University <i>Bachelors of Science , Physics & Astronomy</i>	Bloomington, IN 2002–2007

Primary Research Interests

The Galactic Center, the Molecular Interstellar Medium, Nearby Galaxies, Astrochemistry, Star Formation, Radio and Millimeter Astronomy

Appointments

Boston University <i>Research Assistant Professor</i>	Boston, MA 2017–present
San Jose State University <i>Assistant Professor</i> Teaching and supervising undergraduate and masters students	San Jose, CA 2016–2017
Steward Observatory <i>Postdoctoral Researcher, Jansky Fellow</i> Leading radio and millimeter surveys of molecular gas in the Galactic center and nearby galaxies	Tucson, AZ 2015–2016
National Radio Astronomy Observatory <i>Postdoctoral Researcher, Jansky Fellow</i> Lead radio surveys of molecular gas physical conditions and chemistry in the Galactic center	Socorro, NM 2013–2015
University of California, Los Angeles <i>Graduate Researcher, NSF GK-12 Fellow</i> Conducted radio, submillimeter, and infrared surveys of the ISM. Provided new constraints on gas temperatures and densities in the Galactic Center	Los Angeles, CA 2007–2013
National Radio Astronomy Observatory <i>Undergraduate Researcher, REU Student</i> Studied the dust continuum from Galactic Center molecular clouds	Socorro, NM Summer 2006
Indiana University <i>Undergraduate Researcher, IU STARS Scholar</i> Determined HI rotation curves for a sample of nearby dwarf galaxies	Bloomington, IN 2006
National Optical Astronomy Observatory <i>Undergraduate Researcher, REU Student</i> Measured intervening extinction toward a sample of planetary nebulae	La Serena, Chile Winter 2005
Indiana University <i>Undergraduate Researcher, IU STARS Scholar</i> Performed optical photometry yielding constraints on open star cluster parameters	Bloomington, IN 2002–2005

Visiting Positions

Max Planck Institute for Astronomy <i>Visiting Scientist, Summer Visitor Program</i>	Heidelberg, Germany <i>Summer 2016</i>
European Southern Observatory <i>Visiting Scientist, Scientific Visitor Programme</i>	Garching, Germany <i>May 2015</i>
Max Planck Institute for Astronomy <i>Visiting Researcher, Planet & Star Formation department</i>	Heidelberg, Germany <i>2012-2013</i>
National Radio Astronomy Observatory <i>Visiting Researcher, NRAO Resident Shared-Risk Observing Program</i>	Socorro, NM <i>Summer 2012</i>

Grants and Awards

2017: SJSU Research, Scholarship, and Creative Activity Award (\$5000)
2015: ALMA Development Grant Co-I (\$185,000)
2013: Jansky Postdoctoral Fellowship (\$225,000)
2013: NSF Astronomy and Astrophysics Postdoctoral Fellowship, declined (\$267,000)
2013: NRAO Student Observing Support Program (\$10,000)
2010: NSF GK-12 Fellowship (\$30,000 + fees)
2010: NRAO Student Observing Support Program (\$35,000)
2008: Chancellor's Prize Graduate Summer Research Mentorship Award (\$5000)
2007: Chancellor's Prize (\$5000)
2005: Sigma Xi Grant-in-Aid of Research Award(\$500)

Honors

2013: AAS Doxsey Prize
2008: Honorable mention, NSF Graduate Research Fellowship
2007: Honorable mention, NSF Graduate Research Fellowship
2007: Outstanding Undergraduate Physics Major, IU Physics Dept.
2007: Honorable Mention, AAS Chambliss Award
2006: Johnson Award for Excellence in Student Research, IU Astronomy Dept.
2006: Alumni Award for Overall Academic Excellence, IU Astronomy Dept.
2005: Elected to Phi Beta Kappa
2002-2007: Indiana University Science, Technology, and Research Scholar

Students

2016-Present:

- **J. Andrew Casey-Clyde** (*San Jose State University*):
Second year Masters student

Summer 2015:

- **Kevin Gima** (*Prince George Community College*):
Currently a Senior Astronomy major at the University of Maryland
- **Tierra Candelaria** (*College of Idaho*):
Currently a second-year Astronomy PhD student at New Mexico Institute of Mining and Technology

Summer 2014:

- **Jonathan Barnes** (*Norfolk State University*): How Dense are Galactic Center Clouds?
Masters in Astronomy (CSU Los Angeles)
- **Aspen Clements** (*University of Nebraska-Kearney*): Deuterated Ammonia in Sgr B2
Currently a third-year Chemistry PhD student at the University of Virginia
- **Binqing "Iris" Sun** (*Nanjing University*): Measuring the Temperature of the Circumnuclear Disk
Currently a second-year Astronomy PhD student at UMass
- **Alex Teachey** (*Hunter College*): Characterizing Ammonia Masers in the Galactic Center
Currently a second-year Astronomy PhD student and NSF graduate research fellow at Columbia University

Accepted Observing Proposals

Date	Facility	Time	Status
2017	JWST	15.7 hrs	DD-ERS to measure dusty Wolf Rayet stars
2017	ALMA	30 hrs	3 mm survey of the core of NGC 253 at 2 pc resolution (PI)
2017	ALMA	33 hrs	Band 7 survey of gas conditions in Galactic center clouds (PI)
2015	VLA	2 hrs	DDT search for new Galactic center OH masers (PI)
2015	ALMA	4.7 hrs	Dating the accretion flow around our supermassive black hole
2015	ALMA	28.6 hrs	Surveying the core of the NGC 253 Starburst at 1 pc resolution
2015	ALMA	2.1 hrs	Proper motion of gas around our supermassive black hole
2014	ALMA	16.4 hrs	Excitation study of the Galactic center Circumnuclear Disk (PI)
2014	ALMA	5.9 hrs	Study of atomic gas accretion onto our supermassive black hole
2014	ALMA	7.6 hrs	Search for neutral gas within 0.1 pc of our supermassive black hole
2014	ALMA	2.9 hrs	Studying Galactic center absorption filaments
2014	ALMA	22 hrs	Probing the star formation potential in Sgr B2
2014	GBT	74.5 hrs	Survey of Highly-Excited Ammonia in Nearby Galaxies (PI)
2014	ATCA	3 weeks	Large molecular lines survey of the GC (Co-PI with J. Ott, D. Meier)
2013	VLA	9 hrs	Constraints on dense gas in Galactic center clouds (PI)
2012	VLA	1.5 hrs	DDT search for star formation in a GC cloud (PI)
2011	VLA	24 hrs	Survey of molecular lines in Galactic center clouds (PI)
2010	GBT	9 hrs	Survey of hot ammonia in the Galactic center (PI)

Teaching Experience

Spring 2018 (Boston University): Journal Club

- Co-taught Astrophysics and Space Physics Graduate Student Journal Club

Fall 2017 (Boston University): Introduction to Astronomy

- Co-taught a non-majors introduction to solar system astronomy through the BU Prison Education Program

Spring 2017 (San Jose State University): Introduction to Astronomy, Astrophysics II

- Taught one section of Introduction to Astronomy, a non-majors introduction to astronomy course
- Taught one section of Astrophysics II, a course on the ISM and stellar interiors for Physics majors

Fall 2016 (San Jose State University): Introduction to Astronomy

- Taught two sections of a non-major introduction to astronomy course

Summer 2015: National Astronomy Consortium Cohort Leader

- Developed curriculum and led 1 hr weekly professional development seminar

Summer 2015: Galactic Center Group Meeting Leader

- Led a weekly 1 hr research seminar covering star formation, molecular gas, the Milky Way, and nearby galaxies

2010–2011: NSF GK-12 Fellow at Culver City Middle School, Culver City, CA

- Taught in the classroom two days a week with a local teacher
- Created new lesson materials to enhance the classroom science curriculum

2008–2010: Teaching Assistant, University of California, Los Angeles

- Stellar Atmospheres, Interiors, and Evolution Winter 2008
- Nature of Universe lab Spring 2009
- Cosmology: Our Changing Concepts of the Universe Spring 2009
- Life in Universe Summer 2009
- Astrophysics II: Stellar Evolution, Galaxies, and Cosmology Spring 2010

2007–2009: Center for Adaptive Optics Professional Development Program

- Workshops:
 - Re-Thinking Science & Engineering Learning & Teaching (Santa Cruz, CA) November 2007
 - Inquiry in Science & Engineering Learning & Teaching (Maui, HI) March 2008
 - Advancing Inquiry & the PDP Community (Santa Cruz, CA) April 2009
 - Inquiry in Science & Engineering Learning & Teaching (Maui, HI) May 2009
- Teaching:
 - *Po'okela program for Native Hawaiian high school students* (Maui, HI) July 2008
Developed and taught a week-long program of inquiry-based astronomy to encourage students to pursue science & technical careers in Hawaii.
 - *Akamai Internship program for Hawaiian college students* (Big Island, HI) June 2009
Led a team to develop & co-teach a week-long program of inquiry-based astronomy to prepare students for a 10-week internship at the Mauna Kea Observatories.

Colloquia and Invited Talks

02/2018: UMass-Amherst Colloquium

02/2018: MIT Colloquium

11/2017: Boston University Astronomy Colloquium

10/2017: Far Infrared-Science Interest Group Monthly Seminar (Tele-talk)

08/2017: Invited Review, "SFDE17: From Local Clouds to Distant Galaxies", Quy Nhon, Viet Nam

05/2017: Santa Clara College Colloquium

05/2017: California State University-Northridge Colloquium

04/2017: JPL Astrophysics Luncheon Seminar

04/2017: California State University-East Bay Colloquium

02/2017: SOFIA Colloquium, NASA-Ames

10/2016: San Francisco State Colloquium
07/2016: Invited Review, "IAU 322: The Multi-Messenger Astrophysics of the Galactic Centre", Australia
07/2016: Königstuhl Colloquium, Max Planck Institute for Astronomy, Heidelberg, Germany
04/2016: New Mexico State Colloquium
03/2016: Invited Review, "Carnegie Radio Showcase", Pasadena, CA
03/2016: San Jose State Colloquium
03/2016: Herzberg Institute of Astrophysics Colloquium
03/2016: University of British Columbia Colloquium
01/2016: Northwestern CIERA Theory Seminar
10/2015: Invited Review, "Bashfest", University of Texas at Austin
05/2015: Max Planck Institute for Radio Astronomy Special Colloquium
05/2015: Invited ALMA Community Day Talk, Tucson, AZ
03/2015: Invited Review, "The Soul of High Mass Star Formation" Puerto Varas, Chile
02/2015: National Radio Astronomy Observatory-Socorro Colloquium
12/2014: National Radio Astronomy Observatory-Green Bank Colloquium
07/2014: Los Alamos National Laboratory Astrophysics Colloquium
03/2014: Joint University of Virginia / National Radio Astronomy Observatory Colloquium
02/2014: University of New Mexico Astrophysics Colloquium

Additional Talks

Conference Talks.....

11/2017: "Harvard Heidelberg 2017: Star Formation Across the Universe", Boston, MA
11/2017: "Northeast Radio Observatory Corporation (NEROC) Radio Science Symposium", MIT Haystack
06/2017: "Behind the Curtain of Dust II", Sesto, Italy
01/2017: "Star Formation and Nearby Galaxies with JWST", Pasadena, CA
07/2016: "IAU 322: The Multi-Messenger Astrophysics of the Galactic Centre", Palm Cove, Australia
02/2016: "Dynamics and accretion at the Galactic Center", Aspen, CO
12/2015: "US Radio Futures Meeting", Chicago, IL
03/2015: "Tools for Astronomical Big Data", Tucson, AZ
07/2014: "Behind the Curtain of Dust: The molecular view of activity in (U)LIRGS", Sesto, Italy
01/2014: "Science with the Atacama Pathfinder Experiment (APEX)", Ringberg Castle, Germany
01/2014: 223rd Meeting of the American Astronomical Society, Washington, DC
10/2013: "IAU 303 The Galactic Center: Feeding and Feedback in a Normal Galactic Nucleus", Santa Fe, NM
06/2013: "Regulation of Star Formation in Molecular Gas", Ringberg Castle, Germany
01/2013: 221st Meeting of the American Astronomical Society, Long Beach, CA

06/2012: 220th Meeting of the American Astronomical Society, Anchorage, AK

12/2010: “Star Formation Under Extreme Conditions: the Galactic Center”, Besançon, France

Visitor Seminars.....

05/2017: Guest Seminar, Boston University, Boston, MA

06/2016: Guest Seminar, University of Manchester, England

06/2016: Guest Seminar, Universitat Köln, Germany

10/2015: NOAO FLASH seminar Tucson, AZ

05/2015: ESO Wine and Cheese talk, Garching, Germany

09/2014: Origins Seminar, Tucson, AZ

02/2014: Visitor Talk at Max Planck Institute for Astronomy, Heidelberg, Germany

01/2014: ESO Lunch Talk, Garching, Germany

01/2014: Lunch Talk, National Radio Astronomy Observatory, Socorro, NM

01/2013: Guest Seminar, Leiden, The Netherlands

12/2012: Guest Seminar, ETH Institute For Astronomy, Zurich, Switzerland

11/2012: Planet & Star Formation Seminar, MPA, Heidelberg, Germany

07/2012: Lunch Talk, National Radio Astronomy Observatory, Socorro, NM

03/2011: Lunch Talk, National Radio Astronomy Observatory, Socorro, NM

Blackboard Talks.....

04/2015: ESO Informal Discussion, Garching, Germany

09/2014: NOAO Coffee discussion, Tucson, AZ

Public Talks.....

04/2017: Keynote Speaker, 'Women in Stem Bay Area Research Exposition', Mountainview, CA

04/2014: NRAO Visitors Committee, Socorro, NM

Leadership and Service

Review Panelist.....

2018-2020: Science Review Panel member for NRAO proposals

2017-2019: Science Review Panel member for ALMA proposals

2017: Grant review panelist for NASA

2015, 2017: Grant review panelist for NSF

Advisory Committees.....

2017-2020: Member, FIR Science Interest Group Leadership Council

2016-Present: Executive Committee Member of Astronomy Allies

2014-2016: Advisory Board Member of the National Astronomy Consortium

Scientific Organizing Committees.....

- New Horizons in Galactic Center Astronomy and Beyond (2019, Yokohama, Japan)
- New England Regional Star Formation Meeting (2018, Boston, MA)
- Next Generation VLA Meeting at the 215th AAS (2015, Seattle, WA)
- Life-cycle of gas in galaxies: A local perspective (2015, Dwingeloo, The Netherlands)

Miscellaneous Service.....

2013–Present: Papers Refereed (MNRAS, ApJ, ApJL, A&A)

2018: Spring semester Astrophysics Colloquium organizer, Boston University

2014–2015: Technical reviewer for NRAO proposals

2014–2015: AAS Chambliss Poster Judge

2014–2015: Led a student summer program at NRAO-Socorro for the National Astronomy Consortium

2015: ALMA Community Day Organizer (Tucson, AZ)

- Gave invited talks on research and an overview of NRAO facilities; assisted users with proposal preparation

2014–2015: Lunch Talk Coordinator, NRAO-Socorro

2014: 14th NRAO Synthesis Imaging Workshop (Socorro, NM)

- Led observing preparation and data reduction tutorials
- Created and ran a Careers & Diversity Panel

2012: NRAO Resident Shared-Risk Observing Program (3 months, Socorro, NM)

- Tested and documented new tools for VLA proposal preparation
- Redesigned the user interface for the CASA software webpage

05/2012: 13th NRAO Synthesis Imaging Workshop (Socorro, NM)

- Led observing preparation tutorials

Outreach

2017: Instructor, BU Prison Education Program

2017: Panelist, 'Women in Stem Bay Area Research Exposition (WiSTEM BARE)'

2014–2015: Led public VLA tours

2013: Writer for Astrobites

- Author of blog posts to summarize recent papers for a target audience of Undergraduate students

2010–2011: UCLA Astronomy Outreach Co-Coordinator

2009–2012: UCLA Astronomy Outreach Volunteer

- Founding volunteer of an annual UCLA Astronomy Open House for hands-on science experience
- Developed and built new outreach activities for use at open houses and schools, including an interactive star wall
- Led more than 10 volunteer events on campus and at local underserved schools
- Presented over 20 planetarium shows to diverse audiences

Publications

Refereed Publications.....

24. Walker, D.L., Longmore, S.N., Zhang, Q., Battersby, C., Keto, E., Kruijssen, J.M.D., Ginsburg, A., Lu, X., Henshaw, J.D., Kauffmann, J., Pillai, T., **Mills, E.A.C.**, Walsh, A.J., Bally, J., Ho, L.C., Immer, K., Johnston, K.G. *"Star formation in a high-pressure environment: An SMA view of the Galactic centre dust ridge"*. MNRAS accepted.

23. Butterfield, N., Lang, C.C., Morris, M.R., **Mills, E.A.C.**, Ott, J. "GCM-0.20+0.033: An Expanding Molecular Shell in the Galactic Center Radio Arc". ApJ Accepted.
22. **Mills, E.A.C.**, Togi, A., Kaufman, M. "Hot Molecular Gas in the Circumnuclear Disk". 2017 ApJ 850:192-213.
21. Krieger, N., Ott, J., Beuther, H., Walter, F., Kruijssen, J.M.D., Meier, D.S., **Mills, E.A.C.**, Contreras, Y., Edwards, P., Ginsburg, A., Henkel, C., Henshaw, J., Jackson, J., Kauffmann, J., Longmore, S., Martín, S., Morris, M.R., Pillai, T., Rickert, M., Rosolowsky, E., Shinnaga, H., Walsh, A., Yusef-Zadeh, F., Zhang, Q. "The Survey of Water and Ammonia in the Galactic Center (SWAG): Molecular Cloud Evolution in the Central Molecular Zone". 2017 ApJ 850:77-118.
20. Ginsburg, A., Goddi, C., Kruijssen, J. M.D., Bally, J., Smith, R., Galvan-Madrid, R., **Mills, E.A.C.**, Wang, K., Dale, J.E., Darling, J., Rosolowsky, E., Loughnane, R., Testi, L., Bastian, N., Pineda, J.E. "Thermal Feedback in the High-mass Star and Cluster Forming Region W51: Massive Protostars Like Their Food Well-done". 2017 ApJ 842:92-135
19. Lu, X., Zhang, Q., Kauffmann, J., Pillai, T., Longmore, S.N., Kruijssen, J.M.D., Battersby, C., Liu, H.-B., Ginsburg, A., **Mills, E.A.C.**, Zhang, Z. "The Molecular Gas Environment in the 20 km/s Cloud in the Central Molecular Zone". 2017 ApJ, 839:1-18.
18. **Mills, E.A.C.** and Battersby, C. "Origins of Scatter in the Relationship Between HCN 1-0 and Dense Gas Mass in the Galactic Center". 2017 ApJ, 835:76-89
17. Liu, H.B., Wright, M.C.H., Zhao, J.H., Brinkerink, C.D., Ho, P.T. P., **Mills, E.A.C.**, Martin, S., Falcke, H., Matsushita, S., Martí-Vidal, I. "Linearly Polarized Millimeter and Submillimeter Continuum Emission of Sgr A* Constrained by ALMA". 2016 A&A 593:107-117
16. Feng, S., Beuther, H., Semenov, D., Henning, T., Linz, H., **Mills, E.A.C.** "Inferring the Evolutionary Stages of NGC 7538 S and NGC 7538 IRS1 from Chemistry". 2016 A&A, 593:46-77.
15. Liu, H.B., Wright, M.C.H., Zhao, J.H., **Mills, E.A.C.**, Requena-Torres, M.A., Matsushita, S., Martin, S. "The 492 GHz emission of Sgr A* constrained by ALMA". 2016 A&A, 593:44-54
14. Ludovici, D.A., Lang, C.C., Morris, M.R., Mutel, R., **Mills, E.A.C.**, Toomey, J.E. "The Unusual Galactic Center Radio Source N3". 2016 ApJ 826:218-237
13. Henshaw, J.D., Longmore, S.N., Kruijssen, J.M.D., Battersby, C., Moore, T.J.T., Burton, M., Ott, J., Dale, J., Pillai, T., Ginsburg, A., Schmiedeke, A., Davies, B., Kendrew, S., **Mills, E.A.C.**, Walker, D., Barnes, A., Immer, K., Zhang, Q. "Molecular gas kinematics within the central 250 pc of the Milky Way". 2016 MNRAS, 457:2675-2702
12. Lau, R.M., Hankins, M.J., Herter, T.L., Morris, M.R., **Mills, E.A.C.** "A Dusty Helical Outflow from an Interacting Massive and Evolved Binary". 2016 ApJ, 818:117-130
11. Ginsburg, A., Ao, Y., Riquelme, D., Kauffmann, J., Pillai, T., **Mills, E.A.C.**, Requena-Torres, M.A., Immer, K., Testi, L., Ott, J., Bally, J., Battersby, C., Darling, J., Aalto, S., Stanke, T., Kendrew, S., Kruijssen, J.M.D., Longmore, S., Dale, J., Guesten, R., Menten, K.M. "Dense gas in the Galactic central molecular zone is warm and heated by turbulence". 2016 A&A, 586:50-81
10. Ginsburg, A., Walsh, A., Henkel, C., Jones, P.A., Cunningham, M., Kauffmann, J., Pillai, T., **Mills, E.A.C.**, Ott, J., Kruijssen, J.M.D., Menten, K.M., Battersby, C., Rathborne, J., Contreras, Y., Longmore, S., Walker, D., Dawson, J. "High-mass star-forming cloud G0.38+0.04 in the Galactic Center Dust Ridge contains H₂CO and SiO masers". 2016 A&A, 584:7-12
9. Feng, S., Beuther, H., Henning, T., Semenov, D., Palau, A., **Mills, E.A.C.** "Resolving the Chemical Substructure of Orion-KL". 2015, A&A, 581:71-121
8. **Mills, E.A.C.**, Lang, C.C., Butterfield, N., Ludovici, D.A., Schmitz, S., Ott, J., Morris, M.R. "Abundant CH₃OH Masers but no New Evidence for Star Formation in GCM0.253+0.016". 2015, ApJ, 805:72-97

7. **Mills, E.A.C.**, Güsten, R., Requena-Torres, M.A., Morris, M.R. *"The Excitation of HCN and HCO⁺ in the Galactic Center Circumnuclear Disk"*. 2013, ApJ, 779:47-67
6. **Mills, E.A.C.**, Morris, M.R. *"Detection of Widespread Hot Ammonia in the Galactic Center"*. 2013, ApJ, 772:105-124
5. **Mills, E.A.**, Morris, M.R., Lang, C.C., Cotera, A., Dong, H., Wang, Q.D., Stolovy, S. *"Properties of the Compact H II Regions G-0.02-0.07"*. 2011, ApJ, 735:84-96
4. Dong, H., Wang, Q.D., Cotera, A., Stolovy, S., Morris, M.R., Mauerhan, J., **Mills, E.A.**, Schneider, G., Calzetti, D., Lang, C.C. *"Hubble Space Telescope Paschen α survey of the Galactic Centre: data reduction and products"*. 2011, MNRAS, 417:114-135
3. Stolte, A., Ghez, A.M., Morris, M.R., Do, T., Ballard, C., **Mills, E.A.**, Lu, J.R., Matthews, K. *"L-band sources in the Arches cluster"*. 2010, ApJ, 718:810-831
2. Bally, J., Aguirre, J., Battersby, C., Bradley, E.T., Cyganowski, C., Dowell, D., Drosback, M., Dunham, M.K., Evans, N.J. II, Ginsburg, A., Glenn, J., Harvey, P., **Mills, E.**, Merello, M., Rosolowsky, E., Shirley, Y.L., Schlingman, W., Stringfellow, G., Walawender, J., Williams, J. *The Bolocam Galactic Plane Survey: "Dust Continuum Emission in the Galactic Center Region"*. 2010, ApJ, 721:137-163
1. Beers, T.C., Flynn, C., Rossi, S., Sommer-Larsen, J., Wilhelm, R., Marsteller, B., Lee, Y.S., De Lee, N., Krugler, J., Deliyannis, C.P., Simmons, A.T., **Mills, E.**, Zickgraf, F.J., Holmberg, J., Enehaag, A., Eriksson, A., Terndrup, D., Salim, S., Andersen, J., Nordström, B., Christlieb, N., Frebel, A., Rhee, J. *"Broadband UBVRCIC Photometry of Horizontal-Branch and Metal-poor Candidates from the HK and Hamburg/ESO Surveys. I."*. 2007, ApJS, 168:128-139

Proceedings and Other Works.....

12. Rosen, P., Wang, B., Seth, A., **Mills, E.A.C.**, Ginsburg, A., Kamenetzky, J., Kern, J., Johnson, C.R. *"Using Contour Trees in the Analysis and Visualization of Radio Astronomy Data Cubes"*, Proceedings of IEEE InfoVis 2017
10. Battersby, C., Keto, E., Zhang, Q., Longmore, S. N., Kruijssen, J. M. D., Pillai, T., Kauffmann, J., Walker, D., Lu, X., Ginsburg, A., Bally, J., **Mills, E. A. C.**, Henshaw, J., Immer, K., Patel, N., Tolls, V., Walsh, A., Johnston, K., Ho, L. C. *"A Brief Update on the CMZoom Survey"* 2017 Proceedings of the International Astronomical Union, IAU Symposium, 322:90-94
9. Butterfield, N., Lang, C. C., **Mills, E. A. C.**, Ludovici, D., Ott, J., Morris, M. R. *"Molecular and ionized gas kinematics in the GC Radio Arc"*. 2017 Proceedings of the International Astronomical Union, IAU Symposium, 322:133-136
9. **Mills, E.A.C.** *"The Milky Way's Central Molecular Zone"*. Review from the Proceedings of the Frank N. Bash Symposium, Published in Proceedings of Science, 2015
8. Leroy, A.K., Murphy, E., Armus, L., Brogan, C., Donovan Meyer, J., Evans, A., Hunter, T., Johnson, K., Koda, J., Meier, D.S., Menten, K.M., **Mills, E.A.C.**, Momjian, E., Ott, J., Owen, F., Reid, M., Rosolowsky, E., Schinnerer, E., Scoville, N., Spekkens, K., van Zee, L., Wong, T. *Next Generation Very Large Array Memo No. 7 Science Working Group 2: "Galaxy Ecosystems": The Matter Cycle in and Around Galaxies* 2015
7. **Mills, E.A.C.**, Ginsburg, A., Kruijssen, J.M.D., Sjouwerman, L., Lang, C.C., Mao, S.A., Walsh, A., Su, M., Longmore, S.N., Zhao, J.-H., Meier, D.M., Morris, M.R. *VLA SICK: The VLA Sky Survey in the Central Kiloparsec*. 2014, A White paper for the VLA Sky Survey.
6. **Mills, E.A.C.**, Lang, C.C., Morris, M.R., Ott, J., Butterfield, N., Ludovici, D., Schmitz, D., Schmeideke, A. *A Radio Survey of Galactic Center Clouds*. 2014, Proceedings of IAU 303: "The Galactic Center: Feeding and Feedback in a Normal Galactic Nucleus"
5. Requena-Torres, M.A., **Mills, E.A.C.**, Güsten, R., Morris, M.R., Weiss, A., Martín-Pintado, J., Harris, A. *Opening again the debate: the transient nature of the Circumnuclear Disk*. 2014, Proceedings of IAU 303: "The

Galactic Center: Feeding and Feedback in a Normal Galactic Nucleus"

4. Sjouwerman, L. & **Mills, E.A.C.** *Galactic kU-band Thermal Survey (GUTS)*. 2013, A White paper for the VLA Sky Survey.

3. **Mills, E.A.**, Morris, M.R., Lang, C.C., Cotera, A., Dong, H., Wang, Q.D., Stolovy, S. *Extinction toward the Compact HII Regions G-0.02-0.07*. 2011, PASP, 439:125-127

2. Rafelski, M., Foley, M., Graves, G. J., Kretke, K. A., **Mills, E.**, Nassir, M., Patel, S. *Teaching Astronomy with an Inquiry Activity on Stellar Populations*. 2010, PASP, 436, 108-119

1. Sonnet, S., **Mills, B.**, Hamilton, J.C., Kaluna, H. *The 2009 Akamai Observatory Short Course Inquiry Activity: "Design and Build a Telescope"* 2010, PASP, 436, 131-137

Submitted and In Preparation.....

1. Ginsburg, A., Bally, J., Barnes, A., Bastian, N., Battersby, C., Beuther, H., Brogan, C., Contreras, Y., Corby, J., Darling, J., de Pree, C., Galvan-Madrid, R., Garay, G., Henshaw, J., Hunter, T., Kruijssen, J.M.D., Longmore, S.L., Meng, F., Mills, E.A.C., Ott, J., Pineda, J.E., Sanchez-Monge, A., Schilke, P., Schmiedeke, A., Walker, D., Wilner, D. *"Distributed Star Formation Throughout the Galactic Center Cloud Sgr B2"*. ApJ Submitted.

2. **Mills, E.A.C.**, Corby, J., **Clements, A.***, Butterfield, N., Lang, C.C., Remijan, A.J., Cunningham, M., Jones, P., Ott, J., Morris, M.R. *Warm Deuterated Ammonia in Sagittarius B2 (N)*. In Preparation

3. Aladro, R., Aalto, S., König, S., Falstad, N., Muller, S., Martín, S., González-Alfonso, E., Sakamoto, K., Krips, M., García-Burillo, S., Henkel, C., Costagliola, F., **Mills, E.A.C.**, van der Werf, P. *"Molecular gas in the northern nucleus of Mrk 273. Physical and chemical properties of the disk and its outflow"*. In Preparation.

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