Megan L. Jones

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Education

2018 Ph.D. in Physics, West Virginia University
Thesis: "Multi-Telescope Radio Observations for Low Frequency Gravitational Wave Astrophysics"
2015 M.S. in Physics, West Virginia University
2012 B.S. in Physics, University of Wisconsin–Madison

Research Experience

Aug 2019 – Present Postdoctoral Research Associate, University of Wisconsin–Milwaukee
Jan 2019 – Jul 2019 Postdoctoral Research Fellow, West Virginia University
2013 – 2018 Graduate Researcher, West Virginia University
Poster at AAS 227: ***M. L. Jones***, *M. A. McLaughlin, et al., #435.04*
Poster at AAS 223: ***M. L. Jones***, *M. A. McLaughlin, L. Levin, et al., #153.04*
2010 Summer Student, Green Bank Observatory
Poster at AAS 217: *A. Battisti,* ***M. L. Jones***, *G. Langston, #349.02*
2009 – 2013 Undergraduate Researcher, University of Wisconsin–Madison
Poster at AAS 221: ***M. L. Jones***, *E. Wilcots, #243.15*
Poster at AAS 219: ***M. L. Jones***, *E. Wilcots, #338.21*
Poster at AAS 217: ***M. L. Jones***, *E. Wilcots, #149.01*
C. Gerhartz, ***M. L. Jones***, *K. Hess, E. Wilcots, #149.31*

Teaching Experience

Spring 2022 Instructor at University of Wisconsin–Milwaukee
Course title: 103 Survey of Astronomy.
2016 – 2018 Planetarium Assistant Coordinator at West Virginia University
Scheduling, creating and leading planetarium shows for students from the university and local schools, as well as system maintenance and repair.
2013 – 2016 Astronomy Help Center Tutor at West Virginia University
Fall 2013 Boreman Hall Tutor at West Virginia University
2012 – 2013 Teaching Assistant at University of Wisconsin–Madison
Course title: Our Exploration of the Solar System; led six weekly discussion sections and occasional planetarium shows for an introductory course for non-science majors.
Spring 2013 Lab Instructor at University of Wisconsin–Madison
Course title: Hands-On Universe; introductory astronomy lab for non-science majors.

Successful observing proposals

2020 GMRT40-019, Scintillation Arcs and Dispersion Measure Changes.
Jacob Turner, **Megan L. Jones**, Bhal Chandra Joshi, Maura McLaughlin, Dan Stinebring
2015 GBT15A-396, Searching For Radio Pulsations in the Fermi Source J0523.5-2529
Thomas Finzell, **Megan L. Jones**, Laura Chomiuk, Maura McLaughlin, Jay Strader

Awards

2013 – 2016	STEM Mountains of Excellence Fellowship
2010, 2011	Wisconsin Space Grant Scholarship
2011	Wisconsin Space Grant Research Award
2011	Critical Language Scholarship
2010	Bernice Durand Research Scholarship
2008	Academic Excellence Scholar

Outreach & Service

2021	Referee, American Journal of Physics
Jun 2021	IPTA Meeting, SOC for student workshop
2019 – 2021	Co-Chair of the NANOGrav Noise Budget Working Group
Mar 2020	NANOGrav Collaboration Meeting, SOC chair for student workshop
Jun 2019	IPTA Meeting, SOC for student workshop
2018 – Present	NANOGrav Equity and Climate Committee
2017 – 2021	Adopt-A-Physicist
Apr 2019	NANOGrav Collaboration Meeting, SOC for student workshop
Oct 2018	NANOGrav Collaboration Meeting, SOC
2016 – 2018	Student Peer Advocate, Office of Equity and Diversity at WVU
2016 – 2018	Student Member-At-Large, APS DGRAV Executive Committee
Apr 2017	NANOGrav Collaboration Meeting, LOC
2014 – 2015	WVU Conduct Board Student Representative
2012 – 2013	Universe in the Park
2011 – 2012	University Physics Society Vice-President

Contributed Talks & Posters

Sep 2020	International Pulsar Timing Array Conference, Virtual
Mar 2020	NANOGrav Spring Meeting, Orlando, FL
Oct 2019	NANOGrav Fall Meeting (2 talks, 3 panels), Ithaca, NY
Sep 2019	Graduate Seminar Talk, Milwaukee, WI
Jan 2019	American Astronomical Society Dissertation Talk, Seattle, WA
Mar 2018	NANOGrav Spring Meeting, Charlottesville, VA
Jan 2018	American Astronomical Society, Washington D.C.
Nov 2017	Pechakucha talk, NSF EPSCoR Conference, Missoula, MT
Jun 2017	International Pulsar Timing Array Conference, Sèvres, France
Jan 2017	American Physical Society April Meeting, Washington D.C.
Oct 2016	NANOGrav Fall Meeting, Urbana-Champaign, IL
Nov 2015	UW-Madison Invited Graduate Colloquium, Madison, WI
Oct 2015	APS Meeting Mid-Atlantic Division, Morgantown, WV
Oct 2015	NANOGrav Fall Meeting, Montreal, Canada
Aug 2015	International Pulsar Timing Array Conference, Leura, Australia
Oct 2014	NANOGrav Fall Meeting, Milwaukee, WI
May 2014	Eastern Gravity Meeting, Morgantown, WV

Publications – particular contribution

41. "The NANOGrav 12.5-Year Data Set: Polarimetry, Rotation Measures, and Galactic Magnetic Field Strengths from NANOGrav Observations with the Green Bank Telescope", H. Wahl, M. A. McLaughlin, P. A. Gentile, **M. L. Jones**, et al., 2021, submitted to *ApJ*.

40. "The ASKAP Variables and Slow Transients (VAST) Pilot Survey", T. Murphy, et al.(54 authors, including **M. L. Jones**), 2021, accepted to *PASA*.

39. "The NANOGrav 12.5 Year Data Set: Monitoring Interstellar Scattering Delays", J. Turner, et al.(35 authors, including **M. L. Jones**), 2021, *ApJ*, 917, 10.

38. "Refined Mass and Geometric Measurements of the High-mass PSR J0740+6620 ", E. Fonseca, et al.(44 authors, including **M. L. Jones**), 2021, ApJL, 915, L12.

37. "Evaluating Low-Frequency Pulsar Observations to Monitor Dispersion with the Giant Metrewave Radio Telescope", **M. L. Jones**, et al., 2021, *ApJ*, 915, 15.

36. "The NANOGrav 11 yr Data Set: Limits on Supermassive Black Hole Binaries in Galaxies within 500 Mpc ", Z. Arzoumanian, et al.(54 authors, including **M. L. Jones**), 2021, *ApJ*, 914, 121.

35. "Astrophysics Milestones for Pulsar Timing Array Gravitational-wave Detection", N. Pol, et al.(51 authors, including **M. L. Jones**), 2021, ApJL, 911, L34.

34. "The NANOGrav 12.5-year Data Set: Wideband Timing of 47 Millisecond Pulsars", M. F. Alam, et al.(70 authors, including **M. L. Jones**), 2020, *ApJS*, 252, 5.

33. "The NANOGrav 12.5-year Data Set: Observations and Narrowband Timing of 47 Millisecond Pulsars", M. F. Alam, et al.(70 authors, including **M. L. Jones**), 2020, *ApJS*, 252, 4.

32. "The NANOGrav 12.5-year Data Set: Search For An Isotropic Stochastic Gravitational-Wave Background", Z. Arzoumanian, et al.(61 authors, including **M. L. Jones**), 2020, *ApJ*, 905, 2.

31. "Multimessenger Gravitational-wave Searches with Pulsar Timing Arrays: Application to 3C 66B Using the NANOGrav 11-year Data Set", Z. Arzoumanian, et al.(60 authors, including **M. L. Jones**), 2020, *ApJ*, 900, 2.

30. "The NANOGrav 11 yr Data Set: Constraints on Planetary Masses Around 45 Millisecond Pulsars", E. A. Behrens, et al.(31 authors, including **M. L. Jones**), 2020, *ApJ*, 893, 1.

29. "Modeling the uncertainties of solar-system ephemerides for robust gravitational-wave searches with pulsar timing arrays", M. Vallisneri, et al. (66 authors, including **M. L. Jones**), 2020, *ApJ*, 893, 2.

28. "On Frequency-dependent Dispersion Measures and Extreme Scattering Events", M. T. Lam, T. J. W. Lazio, T. Dolch, **M. L. Jones**, M. A. McLaughlin, D. R. Stinebring, M. Surnis, 2020, *ApJ*, 892, 2.

27. "The NANOGrav 11-Year Data Set: Evolution of Gravitational Wave Background Statistics", J. S. Hazboun, et al. (64 authors, including **M. L. Jones**), 2020, *ApJ*, 890, 108.

26. "Relativistic Shapiro delay measurements of an extremely massive millisecond pulsar", H. T. Cromartie, et al. (27 authors, including **M. L. Jones**), 2019, *Nature*, 4, 72.

25. "The NANOGrav 11 yr Data Set: Limits on Gravitational Wave Memory ", K. Aggarwal, et al. (61 authors, including **M. L. Jones**), 2020, *ApJ*, 889, 1.

24. "The NANOGrav 11-year Data Set: Limits on Gravitational Waves from Individual Supermassive Black Hole Binaries", K. Aggarwal, et al. (60 authors, including **M. L. Jones**), 2019, *ApJ*, 880, 2.

23. "Twelve Decades: Probing the Interstellar Medium from kiloparsec to sub-AU scales", D. R. Stinebring, et al. (19 authors, including **M. L. Jones**), 2019, Astro2020 Science White Paper

22. "High-Precision X-ray Timing of Three Millisecond Pulsars with *NICER*: Stability Estimates and Comparison with Radio", J. S. Deneva et al. (48 authors, including **M. L. Jones**), 2019, *ApJ*, 874, 2.

21. "Investigating the Candidate Displaced Active Galactic Nucleus in NGC 3115",
M. L. Jones, S. Burke-Spolaor, K. Nyland, J. M. Wrobel, 2019, *ApJ*, 874, 2.

20. "The NANOGrav 12.5-Year Data Set: The Frequency Dependence of Pulse Jitter in Precision Millisecond Pulsars", M. T. Lam et al. (28 authors, including **M. L. Jones**), 2019, *ApJ*, 872, 193.

19. "The NANOGrav 11-year Data Set: Solar Wind Sounding Through Pulsar Timing", D. R. Madison et al. (31 authors, including **M. L. Jones**), 2019, *ApJ*, 872, 150.

18. "Tests of Gravitational Symmetries with Pulsar Binary J1713+0747", W. W. Zhu et al. (53 authors, including **M. L. Jones**), 2019, *MNRAS*, 482, 3249.

17. "PSR J2234+0611: A New Laboratory for Stellar Evolution", K. Stovall et al. (33 authors, including **M. L. Jones**), 2019, *ApJ*, 870, 74.

16. "The NANOGrav 11-year Data Set: Pulse Profile Variability", P. R. Brook et al. (33 authors, including **M. L. Jones**), 2018, *ApJ*, 868, 122.

15. "The NANOGrav 11-year Data Set: Arecibo Observatory Polarimetry and Pulse Microcomponents", Gentile et al. (28 authors, including **M. L. Jones**), 2018, *ApJ*, 862, 47.

14. "A Second Chromatic Timing Event of Interstellar Origin toward PSR J1713+0747", M. T. Lam, J. A. Ellis, G. Grillo, **M. L. Jones** et al., 2018, *ApJ*, 861, 2.

13. "The NANOGrav 11-year Data Set: Pulsar-timing Constraints on the Stochastic Gravitational Wave Background", Arzoumanian et al. (62 authors, including **M. L. Jones**), 2018, *ApJ*, 859, 47.

12. "The NANOGrav 11-year Data Set: High-precision Timing of 45 Millisecond Pulsars", Arzoumanian et al. (57 authors, including **M. L. Jones**), 2018, *ApJ*, 235, 37.

11. "The NANOGrav 9-year Data Set: Measurement and Analysis of Variations in Dispersion Measures", **M. L. Jones** et al. (24 authors), 2017, *ApJ*, 841, 2.

10. "The NANOGrav 9-year Data Set: Excess Noise in Millisecond Pulsar Arrival Times", Lam et al. (25 authors, including **M. L. Jones**), 2017, *ApJ*, 834, 35.

9. "The NANOGrav 9-year Data Set: Mass and Geometric Measurements of Binary Millisecond Pulsars", Fonseca et al. (19 authors, including **M. L. Jones**), 2016, *ApJ*, 832, 167.

8. "PSR J1024-0719: A Millisecond Pulsar in an Unusual Long-Period Orbit", Kaplan et al. (35 authors, including **M. L. Jones**), 2016, *ApJ*, 826, 86.

7. "Systematic and Stochastic Variations in Pulsar Dispersion Measures", M. T. Lam, J. M. Cordes, S. Chatterjee, **M. L. Jones**, M. A. McLaughlin, J. W. Armstrong, 2016, *ApJ*, 821, 66.

6. "The NANOGrav 9-year Data Set: Limits on the Isotropic Stochastic Gravitational Wave Background", Arzoumanian et al. (48 authors, including **M. L. Jones**), 2016, *ApJ*, 821, 13.

5. "The NANOGrav 9-year Data Set: Noise Budget For Pulsar Arrival Times on Intraday Timescales", Lam et al. (23 authors, including **M. L. Jones**), 2016, *ApJ*, 819, 155.

4. "The NANOGrav 9-year Data Set: Monitoring Interstellar Scattering Delays", Levin et al. (25 authors, including **M. L. Jones**), 2016, *ApJ*, 818, 166.

3. "The NANOGrav 9-year Data Set: Astrometric Measurements of 37 Millisecond Pulsars", Matthews et al. (21 authors, including **M. L. Jones**), 2016, *ApJ*, 818, 92.

2. "The NANOGrav 9-year Data Set: Observations, Arrival Time Measurements, and Analysis of 37 Millisecond Pulsars", Arzoumanian et al. (44 authors, including **M. L. Jones**), 2015, *ApJ*, 813, 65.

1. "Testing Theories of Gravitation Using 21-Year Timing of Pulsar Binary J1713+0747", Zhu et al. (20 authors, including **M. L. Jones**), 2015, *ApJ*, 809, 41.

References

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