
Curriculum Vitae

Luke Zoltan Kelley

Updated: 2017, Dec. 1

Publications

- [Single Sources in the Low-Frequency Gravitational Wave Sky: *properties and time to detection by pulsar timing arrays*](#)
Kelley, L.Z.; Blecha, L.; Hernquist, L.; Sesana, A.; Taylor, S. 2017
Submitted to MNRAS [arXiv:1711.00075](#)
- [The Gravitational Wave Background from Massive Black Hole Binaries in Illustris: *spectral features and time to detection with pulsar timing arrays*](#)
Kelley, L.Z.; Blecha, L.; Hernquist, L.; Sesana, A.; Taylor, S. Nov. 2017
Monthly Notices of the Royal Astronomical Society, 471, 4 [arXiv:1702.02180](#)
- [Testing the binary hypothesis: *pulsar timing constrains on supermassive black hole binary candidates*](#)
Sesana, A.; Haiman, Z.; Kocsis, B.; **Kelley, L.Z.;** 2017
Submitted [arXiv:1703.10611](#)
- [An Open Catalog for Supernova Data](#)
Guillochon, J.; Parrent, J.; **Kelley, L.Z.;** Margutti, R. Jan, 2017
The Astrophysical Journal, 835, 1 [arXiv:1605.01900](#)
- [Massive Black Hole Binary Mergers in Dynamical Galactic Environments](#)
Kelley, L.Z.; Blecha, L.; Hernquist, L. Oct, 2016
Monthly Notices of the Royal Astronomical Society, 462, 4 [arXiv:1606.01900](#)
- [Recoiling black holes: prospects for detection and implications of spin alignment](#)
Blecha, L.; Sijacki, D.; **Kelley, L.Z.;** Torrey, P.; Vogelsberger, M.; et. al. Feb, 2016
Monthly Notices of the Royal Astronomical Society, 456, 1 [arXiv:1508.01524](#)
- [Tidal Disruption and Magnetic Flux Capture: *Powering a Jet from a Quiescent Black Hole*](#)
Kelley, L.Z.; Tchekhovskoy, A.; Narayan, R. Oct, 2014
Monthly Notices of the Royal Astronomical Society, 445, 4 [arXiv:1410.0366](#)
- [Swift J1644+57 gone MAD: *the case for dynamically-important magnetic flux threading the black hole in a jetted tidal disruption event*](#)
Tchekhovskoy, A.; Metzger, B.D.; Giannios, D.; **Kelley, L.Z.** Jan, 2014
Monthly Notices of the Royal Astronomical Society, 437, 3 [arXiv:1301.1982](#)
- [Electromagnetic transients as triggers in searches for gravitational waves from compact binary mergers](#)
Kelley, L.Z.; Mandel, I.; Ramirez-Ruiz, E. Jun, 2013
Physical Review D, 87, 12 [arXiv:1209.3027](#)
- [The Distribution of Coalescing Compact Binaries in the Local Universe: *Prospects for Gravitational-Wave Observations*](#)
Kelley, L.Z.; Ramirez-Ruiz, E.; Zemp, M.; Diemand, J.; Mandel, I. Dec, 2010
The Astrophysical Journal Letters, 725, L91 [arXiv:1011.1256](#)

Invited Talks

- TAPIR Seminar; CalTech, Pasadena, CA Dec. 2, 2016
- Cosmology Group Seminar; LBNL, Berkeley, CA Nov. 29, 2016
- Galaxy Evolution and NANOGrav
U.S. Radio/Millimeter/Submillimeter Science Futures II; Baltimore, MD Aug. 8, 2016
- MBH Binaries, Gravitational Wave Backgrounds, from the Illustris Cosmological Hydrodynamic Simulations
NANOGrav Meeting; CalTech, Pasadena, CA Mar. 17, 2016
- A Jetted Tidal Disruption: Need for Dynamically-important Magnetic Flux Threading the Super-massive Black Hole
University of Birmingham, Birmingham, UK Aug. 15, 2013
- The Distribution of Compact Binaries in the Local Universe - Gravitational Wave Observations
MIT Kavli Institute, Cambridge, MA Jan. 24, 2011

Press Releases

- “Study predicts distribution of gravitational wave sources”
by Tim Stephens, Dec. 2, 2010. <http://news.ucsc.edu/2010/11/gravity-waves.html>

Awards and Honors

- Smith Family Graduate Science and Engineering Fellowship Harvard 2011, 2012
- Kenneth and Ann Thimann Scholarship UCSC 2011
- Dean’s Award, Chancellor’s Award
- Steck Award - *best undergraduate senior thesis*

Education

- Harvard University
PhD Candidate, Astronomy and Astrophysics 2013 - 2017
MS, Astronomy and Astrophysics 2011 - 2013
- University of California, Santa Cruz
BS - Astrophysics with Honors 2005 - 2010
BS - Molecular, Cellular and Developmental Biology with Honors 2005 - 2010

Positions

- Research Fellow, Graduate student; Harvard University, Astronomy and Astrophysics
Advisor: Lars Hernquist & Laura Blecha 2014 – 2017
Advisor: Ramesh Narayan & Alexander Tchekovskoy 2011 – 2014
- Junior Specialist; University of California, Santa Cruz (UCSC); Astronomy and Astrophysics
Advisor: Enrico Ramirez-Ruiz 2009 – 2011
- Research Intern; SETI at Home, Space Sciences Laboratory, Berkeley, CA
Advisor: Dan Werthimer Summer 2008
- Research Assistant; UCSC, Santa Cruz Institute for Particle Physics (S.C.I.P.P.)
Advisor: Bruce Schumm 2006 – 2008

Teaching Experience

- Lecturer, Harvard Banneker and Aztlán Institutes
Python For Astrophysics, *one week intensive* Summer, 2017
- Lecturer, Harvard Banneker and Aztlán Institutes
Order of Magnitude Astrophysics, *two week intensive* Summer, 2016
- Distinction in Teaching Award Harvard Bok Center, Spring 2014
- Teaching Fellow, Dept. of Astronomy and Astrophysics, Harvard University
Astr 16 - Stellar and Planetary Astrophysics Feb. – May 2014
Astr 17 - High Energy Astrophysics Sept. – Dec. 2013
- Teacher's Assistant, Dept. of Astronomy and Astrophysics, UC Santa Cruz
Astr 111 - Order of Magnitude Astrophysics Sept. – Dec. 2010

Outreach

Talks

- The New Era Of Gravitational Wave Astrophysics
Pint of Science; Boston, MA May 23, 2016
- The Era of Gravitational Wave Astrophysics
Society of Physics Students, UMass Boston; Boston, MA Apr. 7, 2016
- Gravity, Relativity and Black Holes May 4, 2014
Light, Relativity and Spacetime May 18, 2014
Orbits, Dynamics and Space Travel Jun. 1, 2014
Cogitania; Brookline, MA

Mentoring

- Harvard Banneker & Aztlán Institutes
Undergraduate Research Supervisor 2017
- Harvard Department of Astronomy and Astrophysics
Graduate student peer mentor 2014 – 2016
- Harvard Banneker & Aztlán Institutes
Undergraduate program for students of color 2015 – 2017
- Tutoring:
Privately 2005 – 2014
Cogitania; Brookline, MA Summer, 2014
Academic Aptos Tutoring Center; Aptos, CA 2007 – 2009