

Biographical Sketch – Casey J. Law

Professional Preparation

University of Hawai‘i, Physics, B.S. with distinction, 1998
Boston University, Astronomy, M.A., 2000
Northwestern University, Astrophysics, Ph.D., 2007
University of Amsterdam, Astrophysics, Postdoctoral Fellow, 2007 – 2009
University of California at Berkeley, Astrophysics, Radio Astronomy Lab Fellow, 2009 – 2011

Appointments

2011 – present: Assistant Project Scientist at UC Berkeley.
2009 – 2011: Radio Astronomy Lab Postdoctoral Fellow at UC Berkeley.
2006 – 2008: Postdoctoral Fellow at the University of Amsterdam.
2002 – 2006: Graduate Research Assistant at Northwestern University.
2000 – 2002: Astrophysicist at Harvard-Smithsonian Center for Astrophysics.
1998 – 2000: Presidential University Graduate Fellow at Boston University.
1997 – 1998: Hawai‘i Space Grant Fellow at Institute for Astronomy.

Publications

Related to proposed project:

- “A Millisecond Interferometric Search for Fast Radio Bursts with the Very Large Array”, Law, C. J., Bower, G. C., Burke-Spolaor, S., Butler, B., Lawrence, E., Lazio, T. J. W., Mattmann, C. A., Rupen, M., Siemion, A., & VanderWiel, S. 2015, ApJ, 807, 16
- “The RRAT Trap: Interferometric Localization of Radio Pulses from J0628+0909” Law, C. J., Bower, G. C., Pokorny, M., Rupen, M. P., & Sowinski, K. 2012, ApJ, 760, 124
- “Millisecond Imaging of Radio Transients with the Pocket Correlator” Law, C. J., Jones, G., Backer, D. C., Barott, W. C., Bower, G. C., Gutierrez-Kraybill, C., Williams, P. K. G., & Werthimer, D. 2011, ApJ, 742, 12
- Law, C. J., rtpipe: A Pipeline for Real-Time Fast Transient Detection in Radio Interferometric Data (2015), GitHub repository, <https://github.com/caseyjlaw/rtpipe>
- “Rapid Development of Interferometric Software Using MIRIAD and Python” Williams, P. K. G., Law, C. J., & Bower, G. C. 2012, PASP, 124, 624

Other significant publications:

- “All Transients, All the Time: Real-time Radio Transient Detection with Interferometric Closure Quantities” Law, C. J., Bower, G. C. 2012, ApJ, 749, 143
- “Spectropolarimetry with the Allen Telescope Array: Faraday Rotation toward Bright Polarized Radio Galaxies” Law, C. J., Gaensler, B. M., Bower, G. C., Backer, D. C., Bauermeister, A., Croft, S., Forster, R., Gutierrez-Kraybill, C., Harvey-Smith, L., Heiles, C., Hull, C., Keating, G., MacMahon, D., Whysong, D., Williams, P. K. G., & Wright, M. 2011, ApJ, 728, 57
- “A Multiwavelength View of a Mass Outflow from the Galactic Center” Law, C. J. 2010, ApJ, 708, 474

- “Green Bank Telescope Multiwavelength Survey of the Galactic Center Region” Law, C. J., Yusef-Zadeh, F., Cotton, W. D., & Maddalena, R. J. 2008, ApJS, 177, 255
- “X-Ray Observations of Stellar Clusters Near the Galactic Center” Law, C. J. & Yusef-Zadeh, F. 2004, ApJ, 611, 858

Synergistic Activities

- **Open Software:** I have authored open software packages designed for real-time analysis of radio interferometric data streams (“rtpipe” and “realfast”) and contributed to general-purpose radio interferometry software (“miriad-python”, “sdmreader”). These packages are public and available on GitHub.
- **Authored Technical Memos:** I led commissioning programs for the study of polarimetry and transients at the Very Large Array, Allen Telescope Array, and the KAT-7 radio interferometers. My commissioning work at the Very Large Array made increased data throughput by a factor of 100 and made new observing modes possible for the first time. These efforts were published as technical memos (ATA memos at <http://log.hcro.org/content/ata-memo-series>; KAT-7 memos at <http://kat.ac.za/pmwiki/KATCommissioning>).
- **Prison University Project:** In 2010 I began serving as a math tutor for the Prison University Project at San Quentin State Prison (<http://www.prisonuniversityproject.org>). The goal of the project is to provide incarcerated people with access to an accredited college-level curriculum to prepare them for life after prison.
- **Science Outreach:** At the Univ. of Amsterdam and UC Berkeley, I participated in special public science outreach days and led publicity for the “Science@Cal” lecture series. As an undergraduate at the University of Hawai‘i, I helped organize the Hawai‘i Physics Olympics and created a volunteer tutoring program for introductory physics classes.

Collaborators & Other Affiliations

- **Collaborators and Co-Editors:** Bower, G. C. (ASIAA, Hawaii); Bhatnagar, S. (NRAO, New Mexico); Burke-Spolaor, S. (NRAO, New Mexico); Butler, B. (NRAO, New Mexico); Demorest, Paul. (NRAO, New Mexico); Falcke, H. (Nijmegen, Netherlands); Fender, R. P. (Oxford, UK); Lazio, T. J. W. (JPL, California); Pokorny, M. (NRAO, New Mexico); Robnett, J. (NRAO, New Mexico); Rupen, M. (DRAO, Canada); Stappers, B. W. (Manchester, UK); Swinbank, J. (Princeton, New Jersey); Wijers, R. A. M. J. (Amsterdam, Netherlands); Williams, P. K. G. (Harvard, Massachusetts); Wise, M. W. (ASTRON, Netherlands)
- **Advisors:** Farhad Yusef-Zadeh (Northwestern), Ralph Wijers (Amsterdam), Geoff Bower (ASIAA), Carl Heiles (Berkeley)
- **Advisees:** Thijs Coenen (Amsterdam), Peter Williams (Berkeley), Chat Hull (Berkeley), James McBride (Berkeley), Kyle Blanchard (Berkeley), Phillip Sells (Berkeley)