Kiyoshi Wesley Masui

Assistant Professor of Physics

Massachusetts Institute of Technology
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Personal Information

Citizenship Canadian
Languages English, French

Education

2013 Ph.D., Physics, University of Toronto
Thesis: "Advancing precision cosmology with 21 cm intensity mapping"

2008 B.Sc.E., Engineering Physics, Queen's University at Kingston, First class honours
Thesis: "Radioactively inert argon"

Professional Appointments

2018 – present Assistant Professor, Massachusetts Institute of Technology, Department of Physics

2016 – 2018 Canadian Institute for Theoretical Astrophysics National Fellow, University of British Columbia, Department of Physics and Astronomy

2013 – 2015 Canadian Institute for Advanced Research Global Scholar, University of British Columbia, Department of Physics and Astronomy

2013 – 2018 Postdoctoral Fellow, University of British Columbia, Department of Physics and Astronomy

Honors and Awards

2020 Governor General's Innovation Award, Government of Canada, to the CHIME Team

2019 Teaching with Digital Technology Award, Nomination, Massachusetts Institute of Technology

2016 – 2018 National Fellow, Canadian Institute for Theoretical Astrophysics

2013 – 2015 Global Scholar, Canadian Institute for Advanced Research

2012 – 2013 Walter C. Sumner Memorial Fellowship, Walter C. Sumner Foundation

2012 Van Kranendonk Teaching Award, University of Toronto, Department of Physics

2010 – 2012 Alexander Graham Bell Canada Graduate Scholar—Doctoral, Natural Sciences and Engineering Research Council of Canada

2008 – 2010 Canada Graduate Scholar—Master's, Natural Sciences and Engineering Research Council of Canada

2006 – 2008 Dean's Award, Queen's University at Kingston

2004 – 2006 Principal's Scholarship, Queen's University at Kingston

2004 Nortel Networks' Scholarship, Queen's University at Kingston

2004 Governor General's Academic Metal

Publications

Journal Articles

2021 L. Wolz, A. Pourtsidou, **K. W. Masui**, *et al.*, "HI constraints from the cross-correlation of eBOSS galaxies and Green Bank Telescope intensity maps", arXiv e-prints, arXiv:2102.04946 (2021), arXiv:2102.04946.

2021 S. P. Tendulkar, A. Gil de Paz, A. Y. Kirichenko, *et al.*, "The 60 pc Environment of FRB 20180916B", Astrophys. J. Lett. **908**, L12 (2021), arXiv:2011.03257.

2021 C. Leung, J. Mena-Parra, **K. Masui**, *et al.*, "A Synoptic VLBI Technique for Localizing Nonrepeating Fast Radio Bursts with CHIME/FRB", AJ **161**, 81 (2021), arXiv:2008.11738.

2021 S. Zuo, J. Li, Y. Li, D. Santanu, A. Stebbins, **K. W. Masui**, R. Shaw, J. Zhang, F. Wu, and X. Chen, "Data processing pipeline for Tianlai experiment", Astronomy and Computing **34**, 100439 (2021), arXiv:2011.10757.

2020 Z. Pleunis, D. Michilli, C. G. Bassa, *et al.*, "LOFAR Detection of 110-188 MHz Emission and Frequency-Dependent Activity from FRB 20180916B", arXiv e-prints, arXiv:2012.08372 (2020), arXiv:2012.08372.

2020 D. C. Good, B. C. Andersen, P. Chawla, *et al.*, "First discovery of new pulsars and RRATs with CHIME/FRB", arXiv e-prints, arXiv:2012.02320 (2020), arXiv:2012.02320.

2020 CHIME/FRB Collaboration, B. C. Andersen, K. M. Bandura, *et al.*, "A bright millisecond-duration radio burst from a Galactic magnetar", Nature **587**, 54 (2020), arXiv:2005.10324.

2020 C. Ng, B. Wu, M. Ma, *et al.*, "The Discovery of Nulling and Mode-switching Pulsars with CHIME/Pulsar", Astrophys. J. **903**, 81 (2020), arXiv:2009.07697.

2020 D. Michilli, **K. W. Masui**, R. Mckinven, *et al.*, "An analysis pipeline for CHIME/FRB full-array baseband data", arXiv e-prints, arXiv:2010.06748 (2020), arXiv:2010.06748.

2020 P. Scholz, A. Cook, M. Cruces, *et al.*, "Simultaneous X-Ray and Radio Observations of the Repeating Fast Radio Burst FRB ~ 180916.J0158+65", Astrophys. J. **901**, 165 (2020), arXiv:2004.06082.

2020 CHIME/Pulsar Collaboration, M. Amiri, K. M. Bandura, *et al.*, "The CHIME Pulsar Project: System Overview", arXiv e-prints, arXiv:2008.05681 (2020), arXiv:2008.05681.

2020 C. Ng, A. Pandhi, A. Naidu, *et al.*, "Faraday rotation measures of Northern hemisphere pulsars using CHIME/Pulsar", Mon. Not. R. Astron. Soc. **496**, 2836 (2020), arXiv:2006.06538.

2020 M. Rafiei-Ravandi, K. M. Smith, and **K. W. Masui**, "Characterizing fast radio bursts through statistical cross-correlations", Phys. Rev. D **102**, 023528 (2020), arXiv:1912.09520.

2020 CHIME/FRB Collaboration, M. Amiri, B. C. Andersen, *et al.*, "Periodic activity from a fast radio burst source", Nature **582**, 351 (2020), arXiv:2001.10275.

2020 P. Chawla, B. C. Andersen, M. Bhardwaj, *et al.*, "Detection of Repeating FRB 180916.J0158+65 Down to Frequencies of 300 MHz", Astrophys. J. Lett. **896**, L41 (2020), arXiv:2004.02862 [astro-ph.HE].

2020 E. Fonseca, B. C. Andersen, M. Bhardwaj, *et al.*, "Nine New Repeating Fast Radio Burst Sources from CHIME/FRB", Astrophys. J. Lett. **891**, L6 (2020), arXiv:2001.03595.

2020 B. Marcote, K. Nimmo, J. W. T. Hessels, *et al.*, "A repeating fast radio burst source localized to a nearby spiral galaxy", Nature **577**, 190 (2020), arXiv:2001.02222.

2020 N. Denman, A. Renard, K. Vanderlinde, P. Berger, **K. Masui**, and I. Tretyakov, "A GPU Spatial Processing System for CHIME", Journal of Astronomical Instrumentation **9**, 2050014 (2020), arXiv:2005.09481.

2019 CHIME/FRB Collaboration, B. C. Andersen, K. Bandura, *et al.*, "CHIME/FRB Discovery of Eight New Repeating Fast Radio Burst Sources", Astrophys. J. Lett. **885**, L24 (2019), arXiv:1908.03507.

2019 A. Josephy, P. Chawla, E. Fonseca, *et al.*, "CHIME/FRB Detection of the Original Repeating Fast Radio Burst Source FRB 121102", Astrophys. J. Lett. **882**, L18 (2019), arXiv:1906.11305.

2019 **K. W. Masui**, J. R. Shaw, C. Ng, K. M. Smith, K. Vanderlinde, and A. Paradise, "Algorithms for FFT Beamforming Radio Interferometers", Astrophys. J. **879**, 16 (2019).

2019 CHIME/FRB Collaboration, M. Amiri, K. Bandura, *et al.*, "A second source of repeating fast radio bursts", Nature **566**, 235 (2019), arXiv:1901.04525.

2019 CHIME/FRB Collaboration, M. Amiri, K. Bandura, *et al.*, "Observations of fast radio bursts at frequencies down to 400 megahertz", Nature **566**, 230 (2019), arXiv:1901.04524.

2019 J. Taylor, N. Denman, K. Bandura, P. Berger, **K. Masui**, A. Renard, I. Tretyakov, and K. Vanderlinde, "Spectral kurtosis-based rfi mitigation for chime", Journal of Astronomical Instrumentation **8**, 1940004 (2019), arXiv:1808.10365.

2018 CHIME/FRB Collaboration, M. Amiri, K. Bandura, *et al.*, "The CHIME Fast Radio Burst Project: System Overview", Astrophys. J. **863**, 48 (2018), arXiv:1803.11235.

2018 C. J. Anderson, N. J. Luciw, Y.-C. Li, *et al.*, "Low-amplitude clustering in low-redshift 21-cm intensity maps cross-correlated with 2dF galaxy densities", Mon. Not. R. Astron. Soc. **476**, 3382 (2018), arXiv:1710.00424.

2018 R. Hill, **K. W. Masui**, and D. Scott, "The Spectrum of the Universe", Applied Spectroscopy, 0003702818767133 (2018), arXiv:1802.03694.

2018 H.-H. Lin, **K. Masui**, U.-L. Pen, and J. B. Peterson, "Improved pulsar timing via principal component mode tracking", Mon. Not. R. Astron. Soc. **475**, 1323 (2018), arXiv:1707.08581.

2017 L. Wolz, C. Blake, F. B. Abdalla, *et al.*, "Erasing the Milky Way: new cleaning technique applied to GBT intensity mapping data", Mon. Not. R. Astron. Soc. **464**, 4938 (2017), arXiv:1510.05453.

2017 M. Amiri, K. Bandura, P. Berger, *et al.*, "Limits on the Ultra-bright Fast Radio Burst Population from the CHIME Pathfinder", Astrophys. J. **844**, 161 (2017), arXiv:1702.08040.

2017 **K. W. Masui**, U.-L. Pen, and N. Turok, "Two- and Three-Dimensional Probes of Parity in Primordial Gravity Waves", Phys. Rev. Lett. **118**, 221301 (2017), arXiv:1702.06552.

2016 Y.-W. Liao, T.-C. Chang, C.-Y. Kuo, **K. W. Masui**, N. Oppermann, U.-L. Pen, and J. B. Peterson, "Accurate Polarization Calibration at 800 MHz with the Green Bank Telescope", Astrophys. J. **833**, 289 (2016), arXiv:1610.04365.

2016 L. Connor, H.-H. Lin, **K. Masui**, N. Oppermann, U.-L. Pen, J. B. Peterson, A. Roman, and J. Sievers, "Constraints on the FRB rate at 700-900 MHz", Mon. Not. R. Astron. Soc. **460**, 1054 (2016), arXiv:1602.07292.

2015 **K. Masui**, H.-H. Lin, J. Sievers, *et al.*, "Dense magnetized plasma associated with a fast radio burst", Nature **528**, 523 (2015), arXiv:1512.00529.

2015 **K. W. Masui** and K. Sigurdson, "Dispersion Distance and the Matter Distribution of the Universe in Dispersion Space", Phys. Rev. Lett. **115**, 121301 (2015), arXiv:1506.01704.

2015 E. R. Switzer, T.-C. Chang, **K. W. Masui**, U.-L. Pen, and T. C. Voytek, "Interpreting the Unresolved Intensity of Cosmologically Redshifted Line Radiation", Astrophys. J. **815**, 51 (2015), arXiv:1504.07527.

2015 **K. Masui**, M. Amiri, L. Connor, *et al.*, "A compression scheme for radio data in high performance computing", Astronomy and Computing **12**, 181 (2015), arXiv:1503.00638.

2013 E. R. Switzer, **K. W. Masui**, K. Bandura, *et al.*, "Determination of $z \sim 0.8$ neutral hydrogen fluctuations using the 21 cm intensity mapping autocorrelation", Mon. Not. R. Astron. Soc. **434**, L46 (2013), arXiv:1304.3712.

2013 **K. W. Masui**, E. R. Switzer, N. Banavar, *et al.*, "Measurement of 21 cm Brightness Fluctuations at $z \sim 0.8$ in Cross-correlation", Astrophys. J. Lett. **763**, L20 (2013), arXiv:1208.0331.

2010 **K. W. Masui** and U.-L. Pen, "Primordial Gravity Wave Fossils and Their Use in Testing Inflation", Phys. Rev. Lett. **105**, 161302 (2010), arXiv:1006.4181.

2010 **K. W. Masui**, P. McDonald, and U.-L. Pen, "Near-term measurements with 21 cm intensity mapping: Neutral hydrogen fraction and BAO at $z < 2$", Phys. Rev. D **81**, 103527 (2010), arXiv:1001.4811.

2010 **K. W. Masui**, F. Schmidt, U.-L. Pen, and P. McDonald, "Projected constraints on modified gravity cosmologies from 21 cm intensity mapping", Phys. Rev. D **81**, 062001 (2010), arXiv:0911.3552.

2008 S. P. Pecknold, **K. W. Masui**, and P. C. Hines, "Transmission loss measurements and geoacoustic sensitivity modeling at 1.2 kHz", The Journal of the Acoustical Society of America **124**, EL110 (2008).

Conference Proceedings

2017 C. Ng, K. Vanderlinde, A. Paradise, *et al.*, "CHIME FRB: An application of FFT beamforming for a radio telescope", in XXXIInd General Assembly & Scientific Symposium, International Union of the Radio Science (URSI) (Aug. 2017), arXiv:1702.04728.

2016 P. Berger, L. B. Newburgh, M. Amiri, *et al.*, "Holographic Beam Mapping of the CHIME Pathfinder Array", in Ground-based and Airborne Telescopes VI, Vol. 9906, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series (Aug. 2016), arXiv:1607.01473.

2015 N. Denman, M. Amiri, K. Bandura, *et al.*, "A GPU-based Correlator X-engine Implemented on the CHIME Pathfinder", in Application-specific Systems, Architectures and Processors, Institute of Electrical and Electronics Engineers (IEEE) International Conference Series (July 2015), arXiv:1503.06202.

2014 K. Bandura, G. E. Addison, M. Amiri, *et al.*, "Canadian Hydrogen Intensity Mapping Experiment (CHIME) pathfinder", in Ground-based and Airborne Telescopes V, Vol. 9145, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series (July 2014), arXiv:1406.2288.

2014 L. B. Newburgh, G. E. Addison, M. Amiri, *et al.*, "Calibrating CHIME: a new radio interferometer to probe dark energy", in Ground-based and Airborne Telescopes V, Vol. 9145, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series (July 2014), arXiv:1406.2267.

White Papers

2019 K. Bandura, E. Castorina, L. Connor, *et al.*, "Packed Ultra-wideband Mapping Array (PUMA): A Radio Telescope for Cosmology and Transients", Astro2020 Decadal Survey: APC White Papers, arXiv:1907.12559 (2019), arXiv:1907.12559.

2018 Cosmic Visions 21 cm Collaboration, R. Ansari, E. J. Arena, *et al.*, "Inflation and Early Dark Energy with a Stage II Hydrogen Intensity Mapping experiment", Department of Energy Cosmic Visions Dark Energy Program (2018), arXiv:1810.09572.

2010 U.-L. Pen, J. R. Bond, M. Halpern, *et al.*, "21 cm Cosmology", Canadian Astronomical Society Long Range Plan 2010 (2010).

Teaching

Courses Taught

2019, 2021 Physics II: Electricity and Magnetism, Massachusetts Institute of Technology

2021 Special Subject: Physics (Data analysis and computation), Massachusetts Institute of Technology

2019, 2020 Cosmology, Massachusetts Institute of Technology

2018 Physics I: Classical Mechanics, Massachusetts Institute of Technology

Teaching Assistantships

2012 – 2013 Physics Drop in Centre, University of Toronto

2012 Foundations of Physics II, University of Toronto

2011 Foundations of Physics I, University of Toronto

2011 Quantum and Thermal Physics, University of Toronto

2009 Introduction to Physics I, University of Toronto

2009 Introduction to Physics II, University of Toronto

Faculty Sponsor

2017 – 2018 Engineering Physics Project I, University of British Columbia

Supervision and Mentorship

Postdoctoral Supervision

2019 – present Tianyue Chen, Massachusetts Institute of Technology

Graduate Research Supervision

2019 – present Haochen Wang, Massachusetts Institute of Technology

2018 – present Kaitlyn Shin, Massachusetts Institute of Technology

2018 – present Calvin Leung, Massachusetts Institute of Technology

Undergraduate Research Supervision

2019 – present Lulu Russel, Massachusetts Institute of Technology

2020 – present Savannah Cary, Massachusetts Institute of Technology

2020 – present Eve Schoen, Massachusetts Institute of Technology
2018 – 2019 Ellen Lee, Massachusetts Institute of Technology
2017 Tara Akhound-Sadegh, University of British Columbia
2011 – 2012 Nidhi Banavar, University of Toronto
2011 – 2012 Liviu-Mihai Calin, University of Toronto

Graduate Student Mentorship

2016 – present Tristan Pinsonneault-Marotte, University of British Columbia
2015 – 2017 Liam Connor, University of Toronto
2014 – present Deborah Good, University of British Columbia
2014 – present Hsiu-Hsien Lin, Carnegie Mellon University
2013 – present Carolin Höfer, University of British Columbia
2012 – 2017 Christopher Anderson, University of Wisconsin—Madison

Undergraduate Student Mentorship

2014 – 2015 Alexander Roman, Carnegie Mellon University
2013 – 2014 Ze Fu, University of British Columbia

Contributed Public Software

2014 – present Bitshuffle, Primary author
https://github.com/kiyo-masui/bitshuffle
https://pypi.python.org/pypi/bitshuffle

2014 – present Burst Search, Maintainer and contributer
https://github.com/kiyo-masui/burst_search

2013 – present Cluster Astronomical Python Utilities, Maintainer and contributer
https://github.com/radiocosmology/caput

Grants and Allocations

Research Grants

2020 NSF Major Research Instrumentation Program, “Development of a CHIME Outrigger Telescope”, Co Invesigator, $1 700 000 USD

2020 NSF Astronomy and Astrophysics Research Grants, “Collaborative Research: Cosmology with CHIME”, Principal Invesigator, $400 000 USD (MIT portion)

2019 NEC Corporation Fund for Research in Computers and Communication, “Radio Data Recorders for Precise Localization of a Hundred Fast Radio Burst”, Principal Investigator, $75 000 USD

2014 Canadian Institute for Advanced Research Global Scholar Creativity Fund, “Using the stars to test quantum mechanics”, Co-Investigator, $5000 CAD for meeting support

Telescope Allocations

2017 High Sensitivity Array, “Scintillation of FRB121102 and the associated persistent radio source”, Co-Investigator, 50 hours

2017 Green Bank Telescope, “Follow-up of one candidate 21 cm absorber found by blind searching”, Co-Investigator, 12 hours

2015 Green Bank Telescope, “Follow-up of two candidate 21 cm absorbers found by blind searching”, Co-Investigator, 8 hours

2014 Green Bank Telescope, “Redshift space distortions with 21 cm intensity mapping in cross-correlation” (continuation), Co-Investigator, 500 hours

2014 Parkes Observatory, “HI intensity mapping: Parkes-2dFGRS and BAO science”, Co-Investigator, 70 hours

2013 Green Bank Telescope, “Redshift space distortions with 21 cm intensity mapping in cross-correlation”, Co-Investigator, 134 hours

2012 Green Bank Telescope, “21 cm intensity mapping with prototype receiver”, Co-Investigator, 10 hours

2012 Green Bank Telescope, “Baryon acoustic oscillations with 21 cm intensity mapping”, Co-Investigator, 100 hours

2011 Green Bank Telescope, “21 cm intensity mapping”, Co-Investigator, 100 hours plus student support

2010 Green Bank Telescope, “Study of velocity distortions using 21 cm intensity mapping”, Co-Investigator, 300 hours plus student support

Academic Service

Reports

2014 – 2017 Cosmology and Gravity Program Meeting Report, Coauthor, Canadian Institute for Advanced Research (four annual reports)

Events

2019 Science at Low Frequencies VI, Scientific Organizing Committee, Tempe, Dec. 2019

2017 GBT Intensity Mapping Analysis Workshop, Organizer, Toronto, Oct. 2017

2012 GBT Intensity Mapping Analysis Workshop, Organizer, Toronto, May. 2012

2011 21-cm Cosmology: Advanced Data Analysis Workshop, Organizer, Toronto, June. 2011

Peer Review

Nature, Nature Astronomy, Physical Review Letters, Physical Review D, Astrophysical Journal, Monthly Notices of the Royal Astronomical Society, and Astronomy and Computing

Research Presentations

Seminars and Colloquia

2019 Tech Talk, Dominion Radio Astrophyical Observatory, Penticton, July 2019.

2019 Astrophysics Seminar, Brown University, Providence, Apr. 2019.

2018 Astrophysics Seminar, Massachusetts Institute of Technology, Cambridge, Jan. 2018.

2018 Physical Sciences Seminar, University of Washington Bothell, Seattle, Jan. 2018.

2017 Physical Sciences Colloquium, University of Washington Bothell, Seattle, Nov. 2017.

2017 Seminar, Perimeter Institute for Theoretical Physics, Waterloo, Oct. 2017.

2017 Cosmology Seminar, Simon Fraser University, Burnaby, Apr. 2017.

2017 Astronomy & Physics Seminar, Saint Mary's University, Halifax, Mar. 2017.

2017 Astronomy Seminar, Carnegie Mellon University, Pittsburgh, Mar. 2017.

2017 Seminar, Canadian Institute for Theoretical Astrophysics, Toronto, Mar. 2017.

2017 Physics and Astronomy Colloquium, University of British Columbia, Vancouver, Jan. 2017.

2016 Astronomy Tea Talk, California Institute of Technology, Pasadena, Nov. 2016.

2016 Seminar, Perimeter Institute for Theoretical Physics, Waterloo, Jan. 2016.

2015 Dark Universe Science Center Seminar, University of Washington, Seattle, Oct. 2015.

2014 Seminar, Academia Sinica Institute of Astronomy and Astrophysics, Taipei, Oct. 2014.

2012 Cosmology Seminar, University of California, Berkeley, Oct. 2012.

2012 Seminar, Australia Telescope National Facility Headquarters, Sydney, Apr. 2012.

2012 Astrophysics Seminar, University of Melbourne, Mar. 2012.

Conferences

2019 Plenary Talk, Canadian Astronomical Society Annual General Meeting, Montreal, June 2019.

2018 Canadian Astronomical Society Annual General Meeting, Victoria, May 2018.

2017 Plenary Talk, Annual Meeting of the American Physical Society Northwest Section, Forest Grove, June 2017.

2017 Canadian Institute for Advanced Research, Program in Cosmology and Gravity, annual meeting, Lake Louise, Mar. 2017.

2016 Canadian Institute for Advanced Research, Program in Cosmology and Gravity, annual meeting, Whistler, Mar. 2016.

2015 Canadian Institute for Advanced Research, Program in Cosmology and Gravity, annual meeting, Banff, Mar. 2015.

2014 Canadian Institute for Advanced Research, Program in Cosmology and Gravity, annual meeting, Quebec City, May 2014.

2014 A Workshop Celebrating the Career of John A. Galt, Penticton, Sept. 2014.

2013 Canadian Astronomical Society Annual General Meeting, Vancouver, May 2013.

2013 Innovative Techniques in 21cm Analysis, Columbus, Apr. 2013.

2010 CITA25/Bond60, Toronto, May 2010.

Panels

2019 Panelist, Center for Computational Astrophysics Intensity Mapping Workshop, New York, Feb. 2019.

Outreach and Press

Articles

2017 "Research brief: A repeating fast radio burst", Canadian Institute for Advanced Research—Ideas Exchange (2017).

Public Lectures

2017 TRIUMF Saturday Morning Lecture, Simon Fraser University, Burnaby, Dec. 2017.

2017 Cosmic Nights: Science of Science Fiction Lecture, H.R. MacMillan Space Centre, Vancouver, Nov. 2017.

2017 TRIUMF Saturday Morning Lecture, TRIUMF, Vancouver, Sept. 2017.

2016 Monthly Meeting, Royal Astronomical Society of Canada—Vancouver Centre, Vancouver, Apr. 2016.

Events

2017 University of British Columbia Eclipse Event, Volunteer, University of British Columbia, Department of Physics and Astronomy, Aug. 2017

2016 Salal Preschool Departmental Visit, Organizer, University of British Columbia, Department of Physics and Astronomy, Aug. 2016

2009 Science Rendezvous, Volunteer, University of Toronto, May 2009

CHIME Press

2019 C. Wood, "CHIME: Mapping the Early Universe", Space.com (2019).

2019 "Revolutionary radio telescope detects bevy of fast radio bursts", MIT News (2019).

2019 D. Coldeway, "Astronomers spot more mysterious radio signals from far outside the galaxy", Tech Crunch (2019).

2017 I. Semeniuk, "Listening for the universe to chime in", The Globe and Mail (2017).

2017 N. Mortillaro, "Canada's largest radio telescope unveiled in British Columbia", Canadian Broadcasting Corporation News (2017).

FRB 110523 Press

2016 S. Hall, "The Mystery of Fast Radio Bursts", Sky & Telescope **132**, 24 (2016).

2015 E. Gibney, "Mysterious radiowave blast may have come from starquake", Nature, 10.1038/nature.2015.18935 (2015).

2015 N. Drake, "Those Blasts of Radio Waves from Deep Space? Not Aliens", Phenomena, National Geographic (2015).

2015 L. Billings, "Fast Radio Bursts Mystify Experts—for Now", Scientific American (2015).

2015 "'Fast Radio Burst' Sheds New Light on Origin of These Extreme Events", National Radio Astronomy Observatory, press release (2015).

Dispersion Space Press

2015 D. Lindley, "Focus: Radio Signals May Reveal Cosmological Structure", Phyiscs **8**, 90 (2015).

2015 “Researchers propose new way to chart the cosmos in 3D”, University of British Columbia, press release (2015).

2015 “The Flash Measure”, Radio New Zealand National—Nights (2015).