List of Publications

by Artemiy Dmitriev

Individual and Co-Authored Works

1. Dmitriev, A. V., Mescheriakov, S. D., Tokmakov, K. V. & Mitrofanov, V. P. Controllable damping of high-Q violin modes in fused silica suspension fibers. *Classical and Quantum Gravity* **27,** 025009 (Dec. 2009).
2. Dmitriev, A. V. & Mitrofanov, V. P. Enhanced interaction between a mechanical oscillator and two coupled resonant electrical circuits. *Review of Scientific Instruments* **85,** 085005 (Aug. 2014).
3. Dmitriev, A., Gritsenko, D. & Mitrofanov, V. Non-axisymmetric flexural vibrations of free-edge circular silicon wafers. *Physics Letters A* **378,** 673–676 (Feb. 2014).
4. Dmitriev, A., Gritsenko, D. & Mitrofanov, V. Surface vibrational modes in disk-shaped resonators. *Ultrasonics* **54,** 905–913 (Mar. 2014).
5. Dmitriev, A., Toropov, N. & Sumetsky, M. *Transient reconfigurable subangstrom-precise photonic circuits at the optical fiber surface* in *2015 IEEE Photonics Conference (IPC), postdeadline* (IEEE, Oct. 2015).
6. Dmitriev, A. V. & Sumetsky, M. Tunable photonic elements at the surface of an optical fiber with piezoelectric core. *Optics Letters* **41,** 2165 (May 2016).
7. Dmitriev, A. V. & Sumetsky, M. Precise optical characterization of SNAP structures with a reference fiber. *Optics Letters* **41,** 4963 (Oct. 2016).
8. Dmitriev, A. V., Toropov, N. A. & Sumetsky, M. *Miniature optical delay lines and buffers* in *2016 18th International Conference on Transparent Optical Networks (ICTON)* (IEEE, July 2016).
9. Shen, F. *et al. Surface nanoscale axial photonics (SNAP) structures introduced with a femtosecond laser* in *Conference on Lasers and Electro-Optics* (OSA, 2016).
10. Dmitriev, A. & Sumetsky, M. *Creation and control of transient tunable arbitrary-shaped photonic elements at the surface of an optical fiber (Conference Presentation)* in *Laser Resonators, Microresonators, and Beam Control XIX* (eds Kudryashov, A. V., Paxton, A. H. & Ilchenko, V. S.) (SPIE, Apr. 2017).
11. Hamidfar, T., Dmitriev, A., Magdan, B., Bianucci, P. & Sumetsky, M. *Surface nanoscale axial photonics (SNAP) at the silica microcapillary with ultrathin wall* in *2017 IEEE Photonics Conference (IPC)* (IEEE, Oct. 2017).
12. Hamidfar, T., Dmitriev, A., Magdan, B., Bianucci, P. & Sumetsky, M. Surface nanoscale axial photonics at a capillary fiber. *Optics Letters* **42,** 3060 (Aug. 2017).
13. Martinez, A. *et al.* Low-loss saturable absorbers based on tapered fibers embedded in carbon nanotube/polymer composites. *APL Photonics* **2,** 126103 (Dec. 2017).
14. Hamidfar, T. *et al. Droplet-induced optical resonator in a silica microcapillary* in *Conference on Lasers and Electro-Optics* (OSA, 2018).
15. Hamidfar, T. *et al.* Localization of light in an optical microcapillary induced by a droplet. *Optica* **5,** 382 (Mar. 2018).
16. Li, C. *et al.* Broadening the dynamic range of the Pound–Drever–Hall frequency stabilization technique. *Results in Physics* **30,** 104835 (Nov. 2021).

17. Rowlinson, S., Dmitriev, A., Jones, A. W., Zhang, T. & Freise, A. Feasibility study of beam-expanding telescopes in the interferometer arms for the Einstein Telescope. *Physical Review D* **103** (Jan. 2021).

18. Dmitriev, A., Miao, H. & Martynov, D. Enhancing the sensitivity of interferometers with stable phase-insensitive quantum filters. *Physical Review D* **106,** 022007 (July 2022).

19. Heinze, J. *et al. Quantum-enhanced interferometry for dark matter searches* in *Quantum Technology: Driving Commercialisation of an Enabling Science III* (eds Bongs, K., Padgett, M. J., Fedrizzi, A. & Politi, A.) (SPIE, Jan. 2023).

20. Smetana, J., Dmitriev, A., Zhao, C., Miao, H. & Martynov, D. Design of a tabletop interferometer with quantum amplification. *Physical Review A* **107,** 043701 (Apr. 2023).

21. Heinze, J. *et al.* DarkGEO: A Large-Scale Laser-Interferometric Axion Detector. *New Journal of Physics* (May 2024).

22. Heinze, J. *et al.* First Results of the Laser-Interferometric Detector for Axions (LIDA). *Physical Review Letters* **132,** 191002 (May 2024).

23. Maggiore, R., Freise, A., Dmitriev, A. & Sallé, M. Tuning of resonant doublets in coupled optical cavities. *Physical Review D* **109,** 022010 (Jan. 2024).

24. Prokhorov, L. *et al.* Design and sensitivity of a 6-axis seismometer for gravitational wave observatories. *Physical Review D* **109,** 042007 (Feb. 2024).

Collaboration Publications

25. Abbott, B. *et al.* GW170817: Measurements of Neutron Star Radii and Equation of State. *Physical Review Letters* **121** (Oct. 2018).

26. Abbott, B. *et al.* Search for Subsolar-Mass Ultracompact Binaries in Advanced LIGO's First Observing Run. *Physical Review Letters* **121** (Dec. 2018).

27. Abbott, B. P. *et al.* Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo. *The Astrophysical Journal* **882,** L24 (Sept. 2019).

28. Abbott, B. P. *et al.* Low-latency Gravitational-wave Alerts for Multimessenger Astronomy during the Second Advanced LIGO and Virgo Observing Run. *The Astrophysical Journal* **875,** 161 (Apr. 2019).

29. Abbott, B. P. *et al.* Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817. *The Astrophysical Journal* **875,** 160 (Apr. 2019).

30. Abbott, B. P. *et al.* Search for Transient Gravitational-wave Signals Associated with Magnetar Bursts during Advanced LIGO's Second Observing Run. *The Astrophysical Journal* **874,** 163 (Apr. 2019).

31. Abbott, B. P. *et al.* Searches for Continuous Gravitational Waves from 15 Supernova Remnants and Fomalhaut b with Advanced LIGO. *The Astrophysical Journal* **875,** 122 (Apr. 2019).

32. Abbott, B. P. *et al.* Searches for Gravitational Waves from Known Pulsars at Two Harmonics in 2015–2017 LIGO Data. *The Astrophysical Journal* **879,** 10 (June 2019).

33. Abbott, B. *et al.* All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data. *Physical Review D* **100** (July 2019).

34. Abbott, B. *et al.* All-sky search for long-duration gravitational-wave transients in the second Advanced LIGO observing run. *Physical Review D* **99** (May 2019).

35. Abbott, B. *et al.* All-sky search for short gravitational-wave bursts in the second Advanced LIGO and Advanced Virgo run. *Physical Review D* **100** (July 2019).

36. Abbott, B. *et al.* Constraining the p -Mode– g -Mode Tidal Instability with GW170817. *Physical Review Letters* **122** (Feb. 2019).

37. Abbott, B. *et al.* Directional limits on persistent gravitational waves using data from Advanced LIGO's first two observing runs. *Physical Review D* **100** (Sept. 2019).

38. Abbott, B. *et al.* GWTC-1: A Gravitational-Wave Transient Catalog of Compact Binary Mergers Observed by LIGO and Virgo during the First and Second Observing Runs. *Physical Review X* **9** (Sept. 2019).

39. Abbott, B. *et al.* Narrow-band search for gravitational waves from known pulsars using the second LIGO observing run. *Physical Review D* **99** (June 2019).

40. Abbott, B. *et al.* Properties of the Binary Neutron Star Merger GW170817. *Physical Review X* **9** (Jan. 2019).

41. Abbott, B. *et al.* Search for the isotropic stochastic background using data from Advanced LIGO's second observing run. *Physical Review D* **100** (Sept. 2019).

42. Abbott, B. *et al.* Tests of General Relativity with GW170817. *Physical Review Letters* **123** (July 2019).

43. Albert, A. *et al.* Search for Multimessenger Sources of Gravitational Waves and High-energy Neutrinos with Advanced LIGO during Its First Observing Run, ANTARES, and IceCube. *The Astrophysical Journal* **870,** 134 (Jan. 2019).

44. Burns, E. *et al.* A Fermi Gamma-Ray Burst Monitor Search for Electromagnetic Signals Coincident with Gravitational-wave Candidates in Advanced LIGO's First Observing Run. *The Astrophysical Journal* **871,** 90 (Jan. 2019).

45. Soares-Santos, M. *et al.* First Measurement of the Hubble Constant from a Dark Standard Siren using the Dark Energy Survey Galaxies and the LIGO/Virgo Binary–Black-hole Merger GW170814. *The Astrophysical Journal* **876,** L7 (Apr. 2019).

46. Abbott, B. P. *et al.* A guide to LIGO–Virgo detector noise and extraction of transient gravitational-wave signals. *Classical and Quantum Gravity* **37,** 055002 (Feb. 2020).

47. Abbott, B. P. *et al.* Model comparison from LIGO–Virgo data on GW170817's binary components and consequences for the merger remnant. *Classical and Quantum Gravity* **37,** 045006 (Jan. 2020).

48. Abbott, B. P. *et al.* GW190425: Observation of a Compact Binary Coalescence with Total Mass $\sim$ 3.4 M $\odot$. *The Astrophysical Journal* **892,** L3 (Mar. 2020).

49. Abbott, B. *et al.* Optically targeted search for gravitational waves emitted by core-collapse supernovae during the first and second observing runs of advanced LIGO and advanced Virgo. *Physical Review D* **101** (Apr. 2020).

50. Abbott, R. *et al.* Gravitational-wave Constraints on the Equatorial Ellipticity of Millisecond Pulsars. *The Astrophysical Journal* **902,** L21 (Oct. 2020).

51. Abbott, R. *et al.* GW190412: Observation of a binary-black-hole coalescence with asymmetric masses. *Physical Review D* **102** (Aug. 2020).

52. Abbott, R. *et al.* GW190521: A Binary Black Hole Merger with a Total Mass of 150 M$\odot$. *Physical Review Letters* **125** (Sept. 2020).

53. Abbott, R. *et al.* GW190814: Gravitational Waves from the Coalescence of a 23 Solar Mass Black Hole with a 2.6 Solar Mass Compact Object. *The Astrophysical Journal* **896,** L44 (June 2020).

54. Abbott, R. *et al.* Properties and Astrophysical Implications of the 150 M $\odot$ Binary Black Hole Merger GW190521. *The Astrophysical Journal* **900,** L13 (Sept. 2020).

55. Hamburg, R. *et al.* A Joint Fermi-GBM and LIGO/Virgo Analysis of Compact Binary Mergers from the First and Second Gravitational-wave Observing Runs. *The Astrophysical Journal* **893,** 100 (Apr. 2020).

56. Abbott, R. *et al.* All-sky search for continuous gravitational waves from isolated neutron stars in the early O3 LIGO data. *Physical Review D* **104,** 082004 (Oct. 2021).

57. Abbott, R. *et al.* All-sky search for long-duration gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run. *Physical Review D* **104,** 102001 (Nov. 2021).

58. Abbott, R. *et al.* All-sky search for short gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run. *Physical Review D* **104,** 122004 (Dec. 2021).

59. Abbott, R. *et al.* All-sky search in early O3 LIGO data for continuous gravitational-wave signals from unknown neutron stars in binary systems. *Physical Review D* **103** (Mar. 2021).

60. Abbott, R. *et al.* Constraints from LIGO O3 Data on Gravitational-wave Emission Due to R-modes in the Glitching Pulsar PSR J0537–6910. *The Astrophysical Journal* **922,** 71 (Nov. 2021).

61. Abbott, R. *et al.* Constraints on Cosmic Strings Using Data from the Third Advanced LIGO–Virgo Observing Run. *Physical Review Letters* **126** (June 2021).

62. Abbott, R. *et al.* Diving below the Spin-down Limit: Constraints on Gravitational Waves from the Energetic Young Pulsar PSR J0537-6910. *The Astrophysical Journal Letters* **913,** L27 (May 2021).

63. Abbott, R. *et al.* GWTC-2: Compact Binary Coalescences Observed by LIGO and Virgo during the First Half of the Third Observing Run. *Physical Review X* **11** (June 2021).

64. Abbott, R. *et al.* Observation of Gravitational Waves from Two Neutron Star–Black Hole Coalescences. *The Astrophysical Journal Letters* **915,** L5 (June 2021).

65. Abbott, R. *et al.* Open data from the first and second observing runs of Advanced LIGO and Advanced Virgo. *SoftwareX* **13,** 100658 (Jan. 2021).

66. Abbott, R. *et al.* Population Properties of Compact Objects from the Second LIGO–Virgo Gravitational-Wave Transient Catalog. *The Astrophysical Journal Letters* **913,** L7 (May 2021).

67. Abbott, R. *et al.* Search for anisotropic gravitational-wave backgrounds using data from Advanced LIGO and Advanced Virgo's first three observing runs. *Physical Review D* **104,** 022005 (July 2021).

68. Abbott, R. *et al.* Search for Gravitational Waves Associated with Gamma-Ray Bursts Detected by Fermi and Swift during the LIGO–Virgo Run O3a. *The Astrophysical Journal* **915,** 86 (July 2021).

69. Abbott, R. *et al.* Search for Lensing Signatures in the Gravitational-Wave Observations from the First Half of LIGO–Virgo's Third Observing Run. *The Astrophysical Journal* **923,** 14 (Dec. 2021).

70. Abbott, R. *et al.* Searches for Continuous Gravitational Waves from Young Supernova Remnants in the Early Third Observing Run of Advanced LIGO and Virgo. *The Astrophysical Journal* **921,** 80 (Nov. 2021).

71. Abbott, R. *et al.* Tests of general relativity with binary black holes from the second LIGO-Virgo gravitational-wave transient catalog. *Physical Review D* **103** (June 2021).

72. Abbott, R. *et al.* Upper limits on the isotropic gravitational-wave background from Advanced LIGO and Advanced Virgo's third observing run. *Physical Review D* **104,** 022004 (July 2021).

73. Abbott, R. *et al.* All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO and Advanced Virgo O3 data. *Physical Review D* **106,** 102008 (Nov. 2022).

74. Abbott, R. *et al.* All-sky search for gravitational wave emission from scalar boson clouds around spinning black holes in LIGO O3 data. *Physical Review D* **105,** 102001 (May 2022).

75. Abbott, R. *et al.* All-sky, all-frequency directional search for persistent gravitational waves from Advanced LIGO's and Advanced Virgo's first three observing runs. *Physical Review D* **105,** 122001 (June 2022).

76. Abbott, R. *et al.* Constraints on dark photon dark matter using data from LIGO's and Virgo's third observing run. *Physical Review D* **105,** 063030 (Mar. 2022).

77. Abbott, R. *et al.* First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. *Progress of Theoretical and Experimental Physics* **2022,** 063F01 (June 2022).

78. Abbott, R. *et al.* Model-based Cross-correlation Search for Gravitational Waves from the Low-mass X-Ray Binary Scorpius X-1 in LIGO O3 Data. *The Astrophysical Journal Letters* **941,** L30 (Dec. 2022).

79. Abbott, R. *et al.* Narrowband Searches for Continuous and Long-duration Transient Gravitational Waves from Known Pulsars in the LIGO-Virgo Third Observing Run. *The Astrophysical Journal* **932,** 133 (June 2022).

80. Abbott, R. *et al.* Search for continuous gravitational wave emission from the Milky Way center in O3 LIGO-Virgo data. *Physical Review D* **106,** 042003. ISSN: 2470-0029 (Aug. 2022).

81. Abbott, R. *et al.* Search for continuous gravitational waves from 20 accreting millisecond x-ray pulsars in O3 LIGO data. *Physical Review D* **105,** 022002 (Jan. 2022).

82. Abbott, R. *et al.* Search for Gravitational Waves Associated with Gamma-Ray Bursts Detected by Fermi and Swift during the LIGO–Virgo Run O3b. *The Astrophysical Journal* **928,** 186 (Apr. 2022).

83. Abbott, R. *et al.* Search for gravitational waves from Scorpius X-1 with a hidden Markov model in O3 LIGO data. *Physical Review D* **106,** 062002 (Sept. 2022).

84. Abbott, R. *et al.* Search for intermediate-mass black hole binaries in the third observing run of Advanced LIGO and Advanced Virgo. *Astronomy & Astrophysics* **659,** A84 (Mar. 2022).

85. Abbott, R. *et al.* Search for Subsolar-Mass Binaries in the First Half of Advanced LIGO's and Advanced Virgo's Third Observing Run. *Physical Review Letters* **129,** 061104 (Aug. 2022).

86. Abbott, R. *et al.* Search of the early O3 LIGO data for continuous gravitational waves from the Cassiopeia A and Vela Jr. supernova remnants. *Physical Review D* **105,** 082005 (Apr. 2022).

87. Abbott, R. *et al.* Searches for Gravitational Waves from Known Pulsars at Two Harmonics in the Second and Third LIGO-Virgo Observing Runs. *The Astrophysical Journal* **935,** 1 (Aug. 2022).

88. Abbott, R. *et al.* Search for subsolar-mass black hole binaries in the second part of Advanced LIGO's and Advanced Virgo's third observing run. *Monthly Notices of the Royal Astronomical Society* **524,** 5984–5992 (Feb. 2023).

89. Abbott, R. *et al.* Constraints on the Cosmic Expansion History from GWTC-3. *The Astrophysical Journal* **949,** 76 (June 2023).

90. Abbott, R. *et al.* GWTC-3: Compact Binary Coalescences Observed by LIGO and Virgo during the Second Part of the Third Observing Run. *Physical Review X* **13,** 041039 (Dec. 2023).

91. Abbott, R. *et al.* Open Data from the Third Observing Run of LIGO, Virgo, KAGRA, and GEO. *The Astrophysical Journal Supplement Series* **267,** 29 (Aug. 2023).

92. Abbott, R. *et al.* Population of Merging Compact Binaries Inferred Using Gravitational Waves through GWTC-3. *Physical Review X* **13,** 011048 (Mar. 2023).

93. Abbott, R. *et al.* Search for Gravitational Waves Associated with Fast Radio Bursts Detected by CHIME/FRB during the LIGO-Virgo Observing Run O3a. *The Astrophysical Journal* **955,** 155 (Oct. 2023).

94. Abac, A. G. *et al.* A Search Using GEO600 for Gravitational Waves Coincident with Fast Radio Bursts from SGR 1935+2154. *The Astrophysical Journal* **977,** 255. ISSN: 1538-4357 (Dec. 2024).

95. Abac, A. G. *et al.* Search for Eccentric Black Hole Coalescences during the Third Observing Run of LIGO and Virgo. *The Astrophysical Journal* **973,** 132. ISSN: 1538-4357 (Sept. 2024).

96. Abac, A. G. *et al.* Ultralight vector dark matter search using data from the KAGRA O3GK run. *Physical Review D* **110,** 042001. ISSN: 2470-0029 (Aug. 2024).

97. Abbott, R. *et al.* GWTC-2.1: Deep extended catalog of compact binary coalescences observed by LIGO and Virgo during the first half of the third observing run. *Physical Review D* **109,** 022001 (Jan. 2024).

98. Abbott, R. *et al.* Search for Gravitational-lensing Signatures in the Full Third Observing Run of the LIGO–Virgo Network. *The Astrophysical Journal* **970,** 191. ISSN: 1538-4357 (July 2024).

99. Abbott, R. *et al.* Search for Gravitational-wave Transients Associated with Magnetar Bursts in Advanced LIGO and Advanced Virgo Data from the Third Observing Run. *The Astrophysical Journal* **966,** 137 (Apr. 2024).

100. Fletcher, C. *et al.* A Joint Fermi-GBM and Swift-BAT Analysis of Gravitational-wave Candidates from the Third Gravitational-wave Observing Run. *The Astrophysical Journal* **964,** 149 (Mar. 2024).

101. Raman, G. *et al.* Swift-BAT GUANO Follow-up of Gravitational-wave Triggers in the Third LIGO–Virgo–KAGRA Observing Run. *The Astrophysical Journal* **980,** 207. ISSN: 1538-4357 (Feb. 2025).