

List of Publications

by Artemiy Dmitriev

Publications with short author list

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 papers

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 Substellar-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.* 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).
78. 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).
79. 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).
80. 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).
81. 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).
82. 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).
83. 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).
84. 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).
85. 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).
86. 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).
87. Abbott, R. *et al.* Constraints on the Cosmic Expansion History from GWTC-3. *The Astrophysical Journal* **949**, 76 (June 2023).
88. 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).
89. 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).
90. Abbott, R. *et al.* Population of Merging Compact Binaries Inferred Using Gravitational Waves through GWTC-3. *Physical Review X* **13**, 011048 (Mar. 2023).
91. 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).
92. 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).
93. 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).
94. 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).