

R Birney

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132
papers

35,655
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137
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137
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45,387
ext. citations

6.7
avg, IF

4.87
L-index

#	Paper	IF	Citations
132	Observation of Gravitational Waves from a Binary Black Hole Merger. <i>Physical Review Letters</i> , 2016 , 116, 061102	7.4	6108
131	GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral. <i>Physical Review Letters</i> , 2017 , 119, 161101	7.4	4272
130	GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. <i>Physical Review Letters</i> , 2016 , 116, 241103	7.4	2136
129	Multi-messenger Observations of a Binary Neutron Star Merger. <i>Astrophysical Journal Letters</i> , 2017 , 848, L12	7.9	1935
128	Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A. <i>Astrophysical Journal Letters</i> , 2017 , 848, L13	7.9	1614
127	GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2. <i>Physical Review Letters</i> , 2017 , 118, 221101	7.4	1609
126	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. <i>Physical Review Letters</i> , 2017 , 119, 141101	7.4	1270
125	GWTC-1: A Gravitational-Wave Transient Catalog of Compact Binary Mergers Observed by LIGO and Virgo during the First and Second Observing Runs. <i>Physical Review X</i> , 2019 , 9,	9.1	1169
124	GW170817: Measurements of Neutron Star Radii and Equation of State. <i>Physical Review Letters</i> , 2018 , 121, 161101	7.4	867
123	Tests of General Relativity with GW150914. <i>Physical Review Letters</i> , 2016 , 116, 221101	7.4	837
122	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. <i>Astrophysical Journal Letters</i> , 2017 , 851, L35	7.9	809
121	Binary Black Hole Mergers in the First Advanced LIGO Observing Run. <i>Physical Review X</i> , 2016 , 6,	9.1	723
120	GW190425: Observation of a Compact Binary Coalescence with Total Mass $\sim 3.4 M_{\odot}$. <i>Astrophysical Journal Letters</i> , 2020 , 892, L3	7.9	591
119	GW190814: Gravitational Waves from the Coalescence of a 23 Solar Mass Black Hole with a 2.6 Solar Mass Compact Object. <i>Astrophysical Journal Letters</i> , 2020 , 896, L44	7.9	571
118	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. <i>Living Reviews in Relativity</i> , 2018 , 21, 3	32.5	543
117	Properties of the Binary Black Hole Merger GW150914. <i>Physical Review Letters</i> , 2016 , 116, 241102	7.4	515
116	ASTROPHYSICAL IMPLICATIONS OF THE BINARY BLACK HOLE MERGER GW150914. <i>Astrophysical Journal Letters</i> , 2016 , 818, L22	7.9	512

115	Exploring the sensitivity of next generation gravitational wave detectors. <i>Classical and Quantum Gravity</i> , 2017 , 34, 044001	3.3	454
114	Properties of the Binary Neutron Star Merger GW170817. <i>Physical Review X</i> , 2019 , 9,	9.1	423
113	GW190521: A Binary Black Hole Merger with a Total Mass of $150 M_{\odot}$. <i>Physical Review Letters</i> , 2020 , 125, 101102	7.4	420
112	A gravitational-wave standard siren measurement of the Hubble constant. <i>Nature</i> , 2017 , 551, 85-88	50.4	413
111	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. <i>Living Reviews in Relativity</i> , 2016 , 19, 1	32.5	393
110	Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo. <i>Astrophysical Journal Letters</i> , 2019 , 882, L24	7.9	381
109	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. <i>Physical Review Letters</i> , 2016 , 116, 131103	7.4	328
108	GWTC-2: Compact Binary Coalescences Observed by LIGO and Virgo during the First Half of the Third Observing Run. <i>Physical Review X</i> , 2021 , 11,	9.1	311
107	Tests of general relativity with the binary black hole signals from the LIGO-Virgo catalog GWTC-1. <i>Physical Review D</i> , 2019 , 100,	4.9	258
106	GW150914: First results from the search for binary black hole coalescence with Advanced LIGO. <i>Physical Review D</i> , 2016 , 93,	4.9	253
105	GW190412: Observation of a binary-black-hole coalescence with asymmetric masses. <i>Physical Review D</i> , 2020 , 102,	4.9	212
104	THE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914. <i>Astrophysical Journal Letters</i> , 2016 , 833, L1	7.9	209
103	Properties and Astrophysical Implications of the $150 M_{\odot}$ Binary Black Hole Merger GW190521. <i>Astrophysical Journal Letters</i> , 2020 , 900, L13	7.9	207
102	Tests of General Relativity with GW170817. <i>Physical Review Letters</i> , 2019 , 123, 011102	7.4	204
101	Population Properties of Compact Objects from the Second LIGO-Virgo Gravitational-Wave Transient Catalog. <i>Astrophysical Journal Letters</i> , 2021 , 913, L7	7.9	194
100	GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes. <i>Physical Review Letters</i> , 2016 , 116, 131102	7.4	188
99	LOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914. <i>Astrophysical Journal Letters</i> , 2016 , 826, L13	7.9	183
98	Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914. <i>Classical and Quantum Gravity</i> , 2016 , 33,	3.3	155

97	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. <i>Living Reviews in Relativity</i> , 2020 , 23, 3	32.5	144
96	Observation of Gravitational Waves from Two Neutron Star-Black Hole Coalescences. <i>Astrophysical Journal Letters</i> , 2021 , 915, L5	7.9	142
95	Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGO's First Observing Run. <i>Physical Review Letters</i> , 2017 , 118, 121101	7.4	137
94	Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817. <i>Astrophysical Journal Letters</i> , 2017 , 851, L16	7.9	133
93	UPPER LIMITS ON THE RATES OF BINARY NEUTRON STAR AND NEUTRON STAR-BLACK HOLE MERGERS FROM ADVANCED LIGO'S FIRST OBSERVING RUN. <i>Astrophysical Journal Letters</i> , 2016 , 832, L21	7.9	130
92	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817. <i>Astrophysical Journal Letters</i> , 2017 , 850, L39	7.9	127
91	GW170817: Implications for the Stochastic Gravitational-Wave Background from Compact Binary Coalescences. <i>Physical Review Letters</i> , 2018 , 120, 091101	7.4	120
90	Search for the isotropic stochastic background using data from Advanced LIGO's second observing run. <i>Physical Review D</i> , 2019 , 100,	4.9	117
89	First Search for Gravitational Waves from Known Pulsars with Advanced LIGO. <i>Astrophysical Journal</i> , 2017 , 839, 12	4.7	107
88	Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory. <i>Astrophysical Journal Letters</i> , 2017 , 850, L35	7.9	104
87	Observing gravitational-wave transient GW150914 with minimal assumptions. <i>Physical Review D</i> , 2016 , 93,	4.9	94
86	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. <i>Astrophysical Journal Letters</i> , 2019 , 876, L7	7.9	91
85	Improved Analysis of GW150914 Using a Fully Spin-Precessing Waveform Model. <i>Physical Review X</i> , 2016 , 6,	9.1	89
84	All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data. <i>Physical Review D</i> , 2019 , 100,	4.9	81
83	Tests of general relativity with binary black holes from the second LIGO-Virgo gravitational-wave transient catalog. <i>Physical Review D</i> , 2021 , 103,	4.9	81
82	High-energy neutrino follow-up search of gravitational wave event GW150914 with ANTARES and IceCube. <i>Physical Review D</i> , 2016 , 93,	4.9	80
81	A guide to LIGO/Virgo detector noise and extraction of transient gravitational-wave signals. <i>Classical and Quantum Gravity</i> , 2020 , 37, 055002	3.3	78
80	Directly comparing GW150914 with numerical solutions of Einstein's equations for binary black hole coalescence. <i>Physical Review D</i> , 2016 , 94,	4.9	76

79	Effects of waveform model systematics on the interpretation of GW150914. <i>Classical and Quantum Gravity</i> , 2017 , 34, 104002	3.3	74
78	Model comparison from LIGO-Virgo data on GW170817's binary components and consequences for the merger remnant. <i>Classical and Quantum Gravity</i> , 2020 , 37, 045006	3.3	69
77	Search for Substellar Mass Ultracompact Binaries in Advanced LIGO's Second Observing Run. <i>Physical Review Letters</i> , 2019 , 123, 161102	7.4	68
76	Directional Limits on Persistent Gravitational Waves from Advanced LIGO's First Observing Run. <i>Physical Review Letters</i> , 2017 , 118, 121102	7.4	65
75	Search for intermediate mass black hole binaries in the first observing run of Advanced LIGO. <i>Physical Review D</i> , 2017 , 96,	4.9	64
74	Searches for Gravitational Waves from Known Pulsars at Two Harmonics in 2015-2017 LIGO Data. <i>Astrophysical Journal</i> , 2019 , 879, 10	4.7	63
73	Effects of data quality vetoes on a search for compact binary coalescences in Advanced LIGO's first observing run. <i>Classical and Quantum Gravity</i> , 2018 , 35, 065010	3.3	62
72	Calibration of the Advanced LIGO detectors for the discovery of the binary black-hole merger GW150914. <i>Physical Review D</i> , 2017 , 95,	4.9	60
71	Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817. <i>Astrophysical Journal</i> , 2019 , 875, 160	4.7	60
70	Constraints on cosmic strings using data from the first Advanced LIGO observing run. <i>Physical Review D</i> , 2018 , 97,	4.9	60
69	Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background. <i>Physical Review Letters</i> , 2018 , 120, 201102	7.4	60
68	All-sky search for short gravitational-wave bursts in the first Advanced LIGO run. <i>Physical Review D</i> , 2017 , 95,	4.9	54
67	All-sky search for periodic gravitational waves in the O1 LIGO data. <i>Physical Review D</i> , 2017 , 96,	4.9	54
66	First low-frequency Einstein@Home all-sky search for continuous gravitational waves in Advanced LIGO data. <i>Physical Review D</i> , 2017 , 96,	4.9	54
65	SUPPLEMENT: THE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914 (2016, ApJL, 833, L1). <i>Astrophysical Journal, Supplement Series</i> , 2016 , 227, 14	8	52
64	First Search for Nontensorial Gravitational Waves from Known Pulsars. <i>Physical Review Letters</i> , 2018 , 120, 031104	7.4	50
63	On the Progenitor of Binary Neutron Star Merger GW170817. <i>Astrophysical Journal Letters</i> , 2017 , 850, L40	7.9	50
62	A cryogenic silicon interferometer for gravitational-wave detection. <i>Classical and Quantum Gravity</i> , 2020 , 37, 165003	3.3	50

61	Low-latency Gravitational-wave Alerts for Multimessenger Astronomy during the Second Advanced LIGO and Virgo Observing Run. <i>Astrophysical Journal</i> , 2019 , 875, 161	4.7	49
60	Search for Subsolar-Mass Ultracompact Binaries in Advanced LIGO's First Observing Run. <i>Physical Review Letters</i> , 2018 , 121, 231103	7.4	49
59	Search for gravitational waves from Scorpius X-1 in the first Advanced LIGO observing run with a hidden Markov model. <i>Physical Review D</i> , 2017 , 95,	4.9	47
58	A Gravitational-wave Measurement of the Hubble Constant Following the Second Observing Run of Advanced LIGO and Virgo. <i>Astrophysical Journal</i> , 2021 , 909, 218	4.7	46
57	The basic physics of the binary black hole merger GW150914. <i>Annalen Der Physik</i> , 2017 , 529, 1600209	2.6	45
56	Searches for Continuous Gravitational Waves from 15 Supernova Remnants and Fomalhaut b with Advanced LIGO. <i>Astrophysical Journal</i> , 2019 , 875, 122	4.7	45
55	First targeted search for gravitational-wave bursts from core-collapse supernovae in data of first-generation laser interferometer detectors. <i>Physical Review D</i> , 2016 , 94,	4.9	43
54	Narrow-band search for gravitational waves from known pulsars using the second LIGO observing run. <i>Physical Review D</i> , 2019 , 99,	4.9	43
53	Search for Gravitational Waves Associated with Gamma-Ray Bursts during the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B. <i>Astrophysical Journal</i> , 2017 , 841, 89	4.7	42
52	All-sky search for short gravitational-wave bursts in the second Advanced LIGO and Advanced Virgo run. <i>Physical Review D</i> , 2019 , 100,	4.9	39
51	Search for intermediate mass black hole binaries in the first and second observing runs of the Advanced LIGO and Virgo network. <i>Physical Review D</i> , 2019 , 100,	4.9	39
50	First narrow-band search for continuous gravitational waves from known pulsars in advanced detector data. <i>Physical Review D</i> , 2017 , 96,	4.9	39
49	SUPPLEMENT: LOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914[(2016, ApJL, 826, L13). <i>Astrophysical Journal, Supplement Series</i> , 2016 , 225, 8	8	38
48	Full band all-sky search for periodic gravitational waves in the O1 LIGO data. <i>Physical Review D</i> , 2018 , 97,	4.9	37
47	Search for Eccentric Binary Black Hole Mergers with Advanced LIGO and Advanced Virgo during Their First and Second Observing Runs. <i>Astrophysical Journal</i> , 2019 , 883, 149	4.7	36
46	Optically targeted search for gravitational waves emitted by core-collapse supernovae during the first and second observing runs of advanced LIGO and advanced Virgo. <i>Physical Review D</i> , 2020 , 101,	4.9	36
45	Upper Limits on Gravitational Waves from Scorpius X-1 from a Model-based Cross-correlation Search in Advanced LIGO Data. <i>Astrophysical Journal</i> , 2017 , 847, 47	4.7	35
44	Upper limits on the isotropic gravitational-wave background from Advanced LIGO and Advanced Virgo's third observing run. <i>Physical Review D</i> , 2021 , 104,	4.9	33

43	Search for high-energy neutrinos from gravitational wave event GW151226 and candidate LVT151012 with ANTARES and IceCube. <i>Physical Review D</i> , 2017 , 96,	4.9	32
42	Gravitational-wave Constraints on the Equatorial Ellipticity of Millisecond Pulsars. <i>Astrophysical Journal Letters</i> , 2020 , 902, L21	7.9	32
41	Directional limits on persistent gravitational waves using data from Advanced LIGO's first two observing runs. <i>Physical Review D</i> , 2019 , 100,	4.9	31
40	Search for gravitational waves from Scorpius X-1 in the second Advanced LIGO observing run with an improved hidden Markov model. <i>Physical Review D</i> , 2019 , 100,	4.9	31
39	First low frequency all-sky search for continuous gravitational wave signals. <i>Physical Review D</i> , 2016 , 93,	4.9	29
38	Results of the deepest all-sky survey for continuous gravitational waves on LIGO S6 data running on the Einstein@Home volunteer distributed computing project. <i>Physical Review D</i> , 2016 , 94,	4.9	29
37	Comprehensive all-sky search for periodic gravitational waves in the sixth science run LIGO data. <i>Physical Review D</i> , 2016 , 94,	4.9	28
36	All-sky search for long-duration gravitational wave transients with initial LIGO. <i>Physical Review D</i> , 2016 , 93,	4.9	27
35	Investigation of the antimicrobial properties of modified multilayer diamond-like carbon coatings on 316 stainless steel. <i>Surface and Coatings Technology</i> , 2017 , 314, 72-78	4.4	24
34	A Fermi Gamma-Ray Burst Monitor Search for Electromagnetic Signals Coincident with Gravitational-wave Candidates in Advanced LIGO's First Observing Run. <i>Astrophysical Journal</i> , 2019 , 871, 90	4.7	22
33	Constraining the p-Mode-g-Mode Tidal Instability with GW170817. <i>Physical Review Letters</i> , 2019 , 122, 061104	7.4	22
32	Constraints on Cosmic Strings Using Data from the Third Advanced LIGO-Virgo Observing Run. <i>Physical Review Letters</i> , 2021 , 126, 241102	7.4	21
31	Search for Gravitational-wave Signals Associated with Gamma-Ray Bursts during the Second Observing Run of Advanced LIGO and Advanced Virgo. <i>Astrophysical Journal</i> , 2019 , 886, 75	4.7	21
30	Amorphous Silicon with Extremely Low Absorption: Beating Thermal Noise in Gravitational Astronomy. <i>Physical Review Letters</i> , 2018 , 121, 191101	7.4	18
29	All-sky search for long-duration gravitational-wave transients in the second Advanced LIGO observing run. <i>Physical Review D</i> , 2019 , 99,	4.9	17
28	Search for Transient Gravitational-wave Signals Associated with Magnetar Bursts during Advanced LIGO's Second Observing Run. <i>Astrophysical Journal</i> , 2019 , 874, 163	4.7	17
27	High Precision Detection of Change in Intermediate Range Order of Amorphous Zirconia-Doped Tantalum Thin Films Due to Annealing. <i>Physical Review Letters</i> , 2019 , 123, 045501	7.4	17
26	Effect of elevated substrate temperature deposition on the mechanical losses in tantalum thin film coatings. <i>Classical and Quantum Gravity</i> , 2018 , 35, 075001	3.3	16

25	All-sky search for continuous gravitational waves from isolated neutron stars in the early O3 LIGO data. <i>Physical Review D</i> , 2021 , 104,	4.9	15
24	All-sky search in early O3 LIGO data for continuous gravitational-wave signals from unknown neutron stars in binary systems. <i>Physical Review D</i> , 2021 , 103,	4.9	15
23	Search of the Orion spur for continuous gravitational waves using a loosely coherent algorithm on data from LIGO interferometers. <i>Physical Review D</i> , 2016 , 93,	4.9	14
22	Search for continuous gravitational waves from neutron stars in globular cluster NGC 6544. <i>Physical Review D</i> , 2017 , 95,	4.9	14
21	Diving below the Spin-down Limit: Constraints on Gravitational Waves from the Energetic Young Pulsar PSR J0537-6910. <i>Astrophysical Journal Letters</i> , 2021 , 913, L27	7.9	13
20	All-sky search for long-duration gravitational wave transients in the first Advanced LIGO observing run. <i>Classical and Quantum Gravity</i> , 2018 , 35, 065009	3.3	12
19	Search for anisotropic gravitational-wave backgrounds using data from Advanced LIGO and Advanced Virgo's first three observing runs. <i>Physical Review D</i> , 2021 , 104,	4.9	12
18	Mirror Coating Solution for the Cryogenic Einstein Telescope. <i>Physical Review Letters</i> , 2019 , 122, 2311027.4	7.4	11
17	Search for transient gravitational waves in coincidence with short-duration radio transients during 2007-2013. <i>Physical Review D</i> , 2016 , 93,	4.9	10
16	Searches for Continuous Gravitational Waves from Young Supernova Remnants in the Early Third Observing Run of Advanced LIGO and Virgo. <i>Astrophysical Journal</i> , 2021 , 921, 80	4.7	10
15	Search for continuous gravitational waves from 20 accreting millisecond x-ray pulsars in O3 LIGO data. <i>Physical Review D</i> , 2022 , 105,	4.9	9
14	A Joint Fermi-GBM and LIGO/Virgo Analysis of Compact Binary Mergers from the First and Second Gravitational-wave Observing Runs. <i>Astrophysical Journal</i> , 2020 , 893, 100	4.7	9
13	Constraints from LIGO O3 Data on Gravitational-wave Emission Due to R-modes in the Glitching Pulsar PSR J0537-6910. <i>Astrophysical Journal</i> , 2021 , 922, 71	4.7	8
12	Search for Gravitational Waves Associated with Gamma-Ray Bursts Detected by Fermi and Swift during the LIGO-Virgo Run O3a. <i>Astrophysical Journal</i> , 2021 , 915, 86	4.7	6
11	All-sky search for short gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run. <i>Physical Review D</i> , 2021 , 104,	4.9	4
10	Search for intermediate-mass black hole binaries in the third observing run of Advanced LIGO and Advanced Virgo. <i>Astronomy and Astrophysics</i> ,	5.1	4
9	Search for Lensing Signatures in the Gravitational-Wave Observations from the First Half of LIGO-Virgo's Third Observing Run. <i>Astrophysical Journal</i> , 2021 , 923, 14	4.7	4
8	Search of the early O3 LIGO data for continuous gravitational waves from the Cassiopeia A and Vela Jr. supernova remnants. <i>Physical Review D</i> , 2022 , 105,	4.9	4

7	Coatings and surface treatments for enhanced performance suspensions for future gravitational wave detectors. <i>Classical and Quantum Gravity</i> , 2017 , 34, 235012	3.3	2
6	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA 2018 , 21, 1		2
5	All-sky search for gravitational wave emission from scalar boson clouds around spinning black holes in LIGO O3 data. <i>Physical Review D</i> , 2022 , 105,	4.9	2
4	Investigation of Automotive Detailing Products by Ellipsometry and Contact Angle Analysis. <i>Acta Physica Polonica A</i> , 2009 , 116, 712-714	0.6	1
3	All-sky search for long-duration gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run. <i>Physical Review D</i> , 2021 , 104,	4.9	1
2	Exploration of co-sputtered Ta ₂ O ₅ /ZrO ₂ thin films for gravitational-wave detectors. <i>Classical and Quantum Gravity</i> , 2021 , 38, 195021	3.3	1
1	Search for Gravitational Waves Associated with Gamma-Ray Bursts Detected by Fermi and Swift during the LIGO/Virgo Run O3b. <i>Astrophysical Journal</i> , 2022 , 928, 186	4.7	1