Relativistic boost as the cause of periodicity in a massiv

Nature

525, 351-353

DOI: 10.1038/nature15262

Citation Report

#	Article	IF	Citations
1	INFRARED TIME LAGS FOR THE PERIODIC QUASAR PG 1302-102. Astrophysical Journal Letters, 2015, 814, L12.	3.0	21
2	Growth of Supermassive Black Holes, Galaxy Mergers and Supermassive Binary Black Holes. Proceedings of the International Astronomical Union, 2015, 11, 292-298.	0.0	2
3	Retrograde binaries of massive black holes in circumbinary accretion discs. Astronomy and Astrophysics, 2016, 591, A114.	2.1	8
4	A SYSTEMATIC SEARCH FOR PERIODICALLY VARYING QUASARS IN PAN-STARRS1: AN EXTENDED BASELINE TEST IN MEDIUM DEEP SURVEY FIELD MD09. Astrophysical Journal, 2016, 833, 6.	1.6	56
5	A transition in circumbinary accretion discs at a binary mass ratio of 1:25. Monthly Notices of the Royal Astronomical Society, 2016, 459, 2379-2393.	1.6	79
6	SPECTROSCOPIC INDICATION OF A CENTI-PARSEC SUPERMASSIVE BLACK HOLE BINARY IN THE GALACTIC CENTER OF NGCÂ5548. Astrophysical Journal, 2016, 822, 4.	1.6	91
7	A note on periodicity of long-term variations of optical continuum in active galactic nuclei. Monthly Notices of the Royal Astronomical Society: Letters, 2016, 459, L124-L128.	1.2	12
8	A population of short-period variable quasars from PTF as supermassive black hole binary candidates. Monthly Notices of the Royal Astronomical Society, 2016, 463, 2145-2171.	1.6	168
9	PULSED ACCRETION ONTO ECCENTRIC AND CIRCULAR BINARIES. Astrophysical Journal, 2016, 827, 43.	1.6	78
10	SDSS J0159+0105: A RADIO-QUIET QUASAR WITH A CENTI-PARSEC SUPERMASSIVE BLACK HOLE BINARY CANDIDATE*. Astrophysical Journal, 2016, 827, 56.	1.6	49
11	Parsec-scale jet properties of the quasar PG 1302â˜'102. Monthly Notices of the Royal Astronomical Society, 2016, 463, 1812-1821.	1.6	20
12	False periodicities in quasar time-domain surveys. Monthly Notices of the Royal Astronomical Society, 2016, 461, 3145-3152.	1.6	164
13	Detection of Gravitational Wave Emission by Supermassive Black Hole Binaries Through Tidal Disruption Flares. Scientific Reports, 2016, 6, 35629.	1.6	16
14	Suppression of the accretion rate in thin discs around binary black holes. Monthly Notices of the Royal Astronomical Society, 2016, 460, 1243-1253.	1.6	53
15	Minidisks in Binary Black Hole Accretion. Astrophysical Journal, 2017, 835, 199.	1.6	51
16	Extreme Variability in a Broad Absorption Line Quasar. Astrophysical Journal, 2017, 839, 106.	1.6	15
17	Understanding extreme quasar optical variability with CRTS â€“ I. Major AGN flares. Monthly Notices of the Royal Astronomical Society, 2017, 470, 4112-4132.	1.6	79
18	Electromagnetic chirp of a compact binary black hole: A phase template for the gravitational wave inspiral. Physical Review D, 2017, 96, .	1.6	44

#	Article	IF	Citations
19	A Mote in Andromeda's Disk: A Misidentified Periodic AGN behind M31. Astrophysical Journal, 2017, 850, 86.	1.6	13
20	Lighthouse in the dust: infrared echoes of periodic emission from massive black hole binariesâ˜…. Monthly Notices of the Royal Astronomical Society, 2017, 470, 1198-1217.	1.6	20
21	A Multi-wavelength Analysis of Binary-AGN Candidate PSO J334.2028+01.4075. Astrophysical Journal, 2017, 851, 106.	1.6	14
22	LISA detection of binary black holes in the Milky Way galaxy. Monthly Notices of the Royal Astronomical Society, 2017, 469, 930-937.	1.6	15
23	Supermassive Black Hole Binary Candidates from the Pan-STARRS1 Medium Deep Survey. Proceedings of the International Astronomical Union, 2017, 13, 46-52.	0.0	0
24	Testing the relativistic Doppler boost hypothesis for supermassive black hole binary candidates. Monthly Notices of the Royal Astronomical Society, 2018, 476, 4617-4628.	1.6	34
25	Single progenitor model for GW150914 and GW170104. Physical Review D, 2018, 97, .	1.6	24
26	Very Long Baseline Array Imaging of Type-2 Seyferts with Double-peaked Narrow Emission Lines: Searches for Sub-kpc Dual AGNs and Jet-powered Outflows*. Astrophysical Journal, 2018, 854, 169.	1.6	18
27	Testing the Binary Hypothesis: Pulsar Timing Constraints on Supermassive Black Hole Binary Candidates. Astrophysical Journal, 2018, 856, 42.	1.6	53
28	Did ASAS-SN Kill the Supermassive Black Hole Binary Candidate PG1302-102?. Astrophysical Journal Letters, 2018, 859, L12.	3.0	39
29	Swift data hint at a binary supermassive black hole candidate at sub-parsec separation. Monthly Notices of the Royal Astronomical Society, 2018, 479, 3804-3813.	1.6	14
30	VLBI Studies of DAGN and SMBHB Hosting Galaxies. Radio Science, 2018, 53, 1211-1217.	0.8	19
31	Pulsar timing constraints on the Fermi massive black hole binary blazar population. Monthly Notices of the Royal Astronomical Society: Letters, 2018, 481, L74-L78.	1.2	31
32	Testing Relativistic Boost as the Cause of Gamma-Ray Quasi-periodic Oscillation in a Blazar. Astrophysical Journal, 2018, 867, 53.	1.6	14
33	Periodic self-lensing from accreting massive black hole binaries. Monthly Notices of the Royal Astronomical Society, 2018, 474, 2975-2986.	1.6	51
34	Model simulation of jet precession in quasar PG 1302-102. Astronomy and Astrophysics, 2018, 615, A123.	2.1	8
35	The X-ray Chirp of a Compact Black Hole Binary. Foundations of Physics, 2018, 48, 1430-1445.	0.6	3
36	No Evidence of Periodic Variability in the Light Curve of Active Galaxy J0045+41. Astrophysical Journal, 2018, 859, 10.	1.6	11

#	Article	IF	Citations
37	Repeated Imaging of Massive Black Hole Binary Orbits with Millimeter Interferometry: Measuring Black Hole Masses and the Hubble Constant. Astrophysical Journal, 2018, 863, 185.	1.6	25
38	Quasi-periodicity of Supermassive Binary Black Hole Accretion Approaching Merger. Astrophysical Journal, 2019, 879, 76.	1.6	37
39	The astrophysics of nanohertz gravitational waves. Astronomy and Astrophysics Review, 2019, 27, 1.	9.1	166
40	Supermassive Black Hole Binary Candidates from the Pan-STARRS1 Medium Deep Survey. Astrophysical Journal, 2019, 884, 36.	1.6	59
41	The Optical Variability of Supermassive Black Hole Binary Candidate PG 1302â€“102: Periodicity and Perturbation in the Light Curve. Astrophysical Journal, 2019, 871, 32.	1.6	25
42	Massive BH binaries as periodically variable AGN. Monthly Notices of the Royal Astronomical Society, 2019, 485, 1579-1594.	1.6	44
43	Constraining sub-parsec binary supermassive black holes in quasars with multi-epoch spectroscopy â€“ III. Candidates from continued radial velocity tests. Monthly Notices of the Royal Astronomical Society, 2019, 482, 3288-3307.	1.6	42
44	Jet-powered Outflows in Supermassive Black Hole Binary Candidate SDSS J1048+0055. Astrophysical Journal, 2019, 873, 11.	1.6	8
45	The quest for dual and binary supermassive black holes: A multi-messenger view. New Astronomy Reviews, 2019, 86, 101525.	5.2	119
46	Detecting the orbital motion of nearby supermassive black hole binaries with Gaia. Physical Review D, 2019, 100, .	1.6	5
47	The minimum and maximum gravitational-wave background from supermassive binary black holes. Monthly Notices of the Royal Astronomical Society, 2019, 482, 2588-2596.	1.6	18
48	Dynamical evidence from the sub-parsec counter-rotating disc for a close binary of supermassive black holes in NGCâ€‰1068. Monthly Notices of the Royal Astronomical Society, 2020, 497, 1020-1028.	1.6	11
49	Candidate Periodically Variable Quasars from the Dark Energy Survey and the Sloan Digital Sky Survey. Monthly Notices of the Royal Astronomical Society, 0, , .	1.6	28
50	Discovery of a Candidate Binary Supermassive Black Hole in a Periodic Quasar from Circumbinary Accretion Variability. Monthly Notices of the Royal Astronomical Society, 0, , .	1.6	24
51	Testing the relativistic Doppler boost hypothesis for the binary candidate quasar PG1302-102 with multiband Swift data. Monthly Notices of the Royal Astronomical Society, 2020, 496, 1683-1696.	1.6	11
52	Confirmed short periodic variability of subparsec supermassive binary black hole candidate Mrk 231. Monthly Notices of the Royal Astronomical Society, 2020, 494, 4069-4076.	1.6	10
53	Correlation between optical and UV variability of a large sample of quasars. Monthly Notices of the Royal Astronomical Society, 2020, 495, 1403-1413.	1.6	9
54	Detecting gravitational self-lensing from stellar-mass binaries composed of black holes or neutron stars. Monthly Notices of the Royal Astronomical Society, 2020, 491, 1506-1517.	1.6	9

#	Article	IF	Citations
55	Kinematic Signatures of Reverberation Mapping of Close Binaries of Supermassive Black Holes in Active Galactic Nuclei. II. Atlas of Two-dimensional Transfer Functions. Astrophysical Journal, Supplement Series, 2020, 247, 3.	3.0	16
56	Spikey: self-lensing flares from eccentric SMBH binaries. Monthly Notices of the Royal Astronomical Society, 2020, 495, 4061-4070.	1.6	25
57	Varstrometry for Off-nucleus and Dual Subkiloparsec AGN (VODKA): Methodology and Initial Results with Gaia DR2. Astrophysical Journal, 2020, 888, 73.	1.6	30
58	Spectral energy distributions of candidate periodically variable quasars: testing the binary black hole hypothesis. Monthly Notices of the Royal Astronomical Society, 2020, 492, 2910-2923.	1.6	11
59	Testing the relativistic Doppler boost hypothesis for supermassive binary black holes candidates via broad emission line profiles. Monthly Notices of the Royal Astronomical Society, 2020, 491, 4023-4030.	1.6	10
60	A self-lensing binary massive black hole interpretation of quasi-periodic eruptions. Monthly Notices of the Royal Astronomical Society, 2021, 503, 1703-1716.	1.6	38
61	Equilibrium Eccentricity of Accreting Binaries. Astrophysical Journal Letters, 2021, 909, L13.	3.0	50
62	Variation of Broad Emission Lines from QSOs with Optical/UV Periodicity to Test the Interpretation of Supermassive Binary Black Holes. Astrophysical Journal, 2021, 910, 101.	1.6	9
63	X-ray quasi-periodic eruptions from two previously quiescent galaxies. Nature, 2021, 592, 704-707.	13.7	82
64	ASASSN-14ko is a Periodic Nuclear Transient in ESO 253-G003. Astrophysical Journal, 2021, 910, 125.	1.6	45
65	Detecting subparsec supermassive binary black holes: Long-term monitoring perspective. Monthly Notices of the Royal Astronomical Society, 2021, 505, 5192-5211.	1.6	4
66	The Search for Binary Supermassive Black Holes among Quasars with Offset Broad Lines Using the Very Long Baseline Array. Astrophysical Journal, 2021, 914, 37.	1.6	9
67	On possible proxies of AGN light-curves cadence selection in future time domain surveys. Monthly Notices of the Royal Astronomical Society, 2021, 505, 5012-5028.	1.6	6
68	Ultra-short-period massive black hole binary candidates in LSST as LISA â€˜verification binariesâ€™. Monthly Notices of the Royal Astronomical Society, 2021, 506, 2408-2417.	1.6	17
69	Multimessenger Pulsar Timing Array Constraints on Supermassive Black Hole Binaries Traced by Periodic Light Curves. Astrophysical Journal, 2021, 915, 97.	1.6	16
70	Very Large Array imaging rules out precessing radio jets in three DESâ€“SDSS-selected candidate periodic quasars. Monthly Notices of the Royal Astronomical Society, 2021, 507, 4638-4645.	1.6	4
71	Superposed metric for spinning black hole binaries approaching merger. Physical Review D, 2021, 104, .	1.6	11
72	Periodic variability of the z = 2.0 quasar QSO B1312+7837. Monthly Notices of the Royal Astronomical Society, 0, , .	1.6	1

#	Article	IF	Citations
73	Gravitational self-lensing in populations of massive black hole binaries. Monthly Notices of the Royal Astronomical Society, 2021, 508, 2524-2536.	1.6	10
74	Broad-line region configuration of the supermassive binary black hole candidate PG1302-102 in the relativistic Doppler boosting scenario. Astronomy and Astrophysics, 2021, 645, A15.	2.1	6
75	Observational signatures of close binaries of supermassive black holes in active galactic nuclei. Research in Astronomy and Astrophysics, 2020, 20, 160.	0.7	8
76	The BAT AGN Spectroscopic Survey. XVIII. Searching for Supermassive Black Hole Binaries in X-Rays. Astrophysical Journal, 2020, 896, 122.	1.6	11
77	A Chandra X-Ray Survey of Optically Selected AGN Pairs. Astrophysical Journal, 2020, 900, 79.	1.6	15
78	Circumbinary Disks: Accretion and Torque as a Function of Mass Ratio and Disk Viscosity. Astrophysical Journal, 2020, 901, 25.	1.6	99
79	Toward the Unambiguous Identification of Supermassive Binary Black Holes through Bayesian Inference. Astrophysical Journal, 2020, 900, 117.	1.6	17
80	Chandra Observations of Candidate Subparsec Binary Supermassive Black Holes. Astrophysical Journal, 2020, 900, 148.	1.6	13
81	Unveiling Sub-pc Supermassive Black Hole Binary Candidates in Active Galactic Nuclei. Astrophysical Journal, 2020, 902, 10.	1.6	12
82	Doppler Boosting of the S-stars in the Galactic Center. Astrophysical Journal Letters, 2020, 905, L35.	3.0	2
83	Analysis on complexity of optical variability based on approximate entropy in Sloan digital sky survey quasars. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 149801.	0.2	1
84	Binary black hole signatures in polarized light curves. Monthly Notices of the Royal Astronomical Society, 2021, 509, 212-223.	1.6	6
85	Variations of broad emission lines from periodicity QSOs under the interpretation of supermassive binary black holes with misaligned circumbinary broad line regions. Research in Astronomy and Astrophysics, 2021, 21, 219.	0.7	0
86	Multi-messenger Approaches to Supermassive Black Hole Binary Detection and Parameter Estimation: Implications for Nanohertz Gravitational Wave Searches with Pulsar Timing Arrays. Astrophysical Journal, 2021, 921, 178.	1.6	10
87	The broad emission line asymmetry in a low mass ratio of supermassive binary black holes on elliptical orbits. Astronomische Nachrichten, 0, , .	0.6	0
88	Dirty waveforms: multiband harmonic content of gas-embedded gravitational wave sources. Monthly Notices of the Royal Astronomical Society, 2022, 511, 6143-6159.	1.6	13
89	Orbit Tomography of Binary Supermassive Black Holes with Very Long Baseline Interferometry. Astrophysical Journal, 2022, 927, 93.	1.6	3
90	Electromagnetic Signatures from Supermassive Binary Black Holes Approaching Merger. Astrophysical Journal, 2022, 928, 137.	1.6	17

#	Article	IF	Citations
91	Minidisk Accretion onto Spinning Black Hole Binaries: Quasi-periodicities and Outflows. Astrophysical Journal, 2022, 928, 187.	1.6	15
92	Multimessenger time-domain signatures of supermassive black hole binaries. Monthly Notices of the Royal Astronomical Society, 2022, 510, 5929-5944.	1.6	20
93	VLBI imaging of the pre-coalescence SMBHB candidate SDSS J143016.05+230344.4. Astronomy and Astrophysics, 2022, 663, A139.	2.1	7
94	Detection of eccentric close-binary supermassive black holes with incomplete interferometric data. Astronomy and Astrophysics, 2022, 663, A99.	2.1	1
95	åŸºäºŽåˆ†å½¢å¸ƒæœ—è¿åŠ¨çš„æ–¯é€†æ•°å—¡å·¡å©ä¸±»æ˜Ÿä½“å…‰å•ç‰¹æ€§. Scientia Sinica: Physica, Mechanica Et Astronomica, 2	0.2	1
96	Electromagnetic counterparts to massive black-hole mergers. Living Reviews in Relativity, 2022, 25, .	8.2	26
97	Modeling Long-term Variability in Stellar-compact Object Binary Systems for Mass Determinations. Astrophysical Journal, 2022, 936, 63.	1.6	3
98	X-ray view of a merging supermassive black hole binary candidate SDSS J1430+2303: Results from the first â¼200 days of observations. Astronomy and Astrophysics, 2022, 665, L3.	2.1	5
99	Quasars with Periodic Variability: Capabilities and Limitations of Bayesian Searches for Supermassive Black Hole Binaries in Time-domain Surveys. Astrophysical Journal, 2022, 936, 89.	1.6	6
100	Controlling outlier contamination in multimessenger time-domain searches for supermasssive binary black holes. Monthly Notices of the Royal Astronomical Society, 2022, 516, 5874-5886.	1.6	1
101	Final stage of merging binaries of supermassive black holes: observational signatures. Monthly Notices of the Royal Astronomical Society, 2022, 518, 3397-3406.	1.6	3
102	Multiband light curves from eccentric accreting supermassive black hole binaries. Physical Review D, 2022, 106, .	1.6	10
103	Optical follow-up of the tick-tock massive black hole binary candidate. Monthly Notices of the Royal Astronomical Society, 2022, 518, 4172-4179.	1.6	8
104	Minidisc influence on flow variability in accreting spinning black hole binaries: simulations in full general relativity. Monthly Notices of the Royal Astronomical Society, 2023, 520, 392-401.	1.6	3
105	Absence of the predicted 2022 October outburst of OJ 287 and implications for binary SMBH scenarios. Monthly Notices of the Royal Astronomical Society: Letters, 2023, 522, L84-L88.	1.2	9
106	Multi-messenger Approaches to Supermassive Black Hole Binary Detection and Parameter Estimation. II. Optimal Strategies for a Pulsar Timing Array. Astrophysical Journal, 2023, 945, 78.	1.6	2
107	Astrophysics with the Laser Interferometer Space Antenna. Living Reviews in Relativity, 2023, 26, .	8.2	107
108	Differential Interferometric Signatures of Close Binaries of Supermassive Black Holes in Active Galactic Nuclei. II. Merged Broad-line Regions. Astrophysical Journal, 2023, 945, 89.	1.6	2

#	Article	IF	Citations
109	Three cases of optical periodic modulation in Active Galactic Nuclei. Monthly Notices of the Royal Astronomical Society, 2023, 522, 2928-2935.	1.6	1