

# Andrew Cumming

## List of Publications by Year in descending order

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129  
papers

30,328  
citations

41258

49  
h-index

17546

121  
g-index

130  
all docs

130  
docs citations

130  
times ranked

17168  
citing authors

#	ARTICLE	IF	CITATIONS
1	Observation of Gravitational Waves from a Binary Black Hole Merger. <i>Physical Review Letters</i> , 2016, 116, 061102.	2.9	8,753
2	GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral. <i>Physical Review Letters</i> , 2017, 119, 161101.	2.9	6,413
3	GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. <i>Physical Review Letters</i> , 2016, 116, 241103.	2.9	2,701
4	GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2. <i>Physical Review Letters</i> , 2017, 118, 221101.	2.9	1,987
5	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. <i>Physical Review Letters</i> , 2017, 119, 141101.	2.9	1,600
6	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. <i>Living Reviews in Relativity</i> , 2018, 21, 3.	8.2	808
7	Exploring the sensitivity of next generation gravitational wave detectors. <i>Classical and Quantum Gravity</i> , 2017, 34, 044001.	1.5	735
8	The Keck Planet Search: Detectability and the Minimum Mass and Orbital Period Distribution of Extrasolar Planets. <i>Publications of the Astronomical Society of the Pacific</i> , 2008, 120, 531-554.	1.0	711
9	End Point of therpProcess on Accreting Neutron Stars. <i>Physical Review Letters</i> , 2001, 86, 3471-3474.	2.9	469
10	The Lick Planet Search: Detectability and Mass Thresholds. <i>Astrophysical Journal</i> , 1999, 526, 890-915.	1.6	314
11	Models for Type I X-ray Bursts with Improved Nuclear Physics. <i>Astrophysical Journal, Supplement Series</i> , 2004, 151, 75-102.	3.0	286
12	The California-Kepler Survey. V. Peas in a Pod: Planets in a Kepler Multi-planet System Are Similar in Size and Regularly Spaced <sup>*</sup> . <i>Astronomical Journal</i> , 2018, 155, 48.	1.9	239
13	Detectability of extrasolar planets in radial velocity surveys. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 354, 1165-1176.	1.6	217
14	MAPPING CRUSTAL HEATING WITH THE COOLING LIGHT CURVES OF QUASI-PERSISTENT TRANSIENTS. <i>Astrophysical Journal</i> , 2009, 698, 1020-1032.	1.6	212
15	The Rapid Proton Process Ashes from Stable Nuclear Burning on an Accreting Neutron Star. <i>Astrophysical Journal</i> , 1999, 524, 1014-1029.	1.6	198
16	Carbon Flashes in the Heavy-Element Ocean on Accreting Neutron Stars. <i>Astrophysical Journal</i> , 2001, 559, L127-L130.	1.6	195
17	Magnetic Field Evolution in Neutron Star Crusts Due to the Hall Effect and Ohmic Decay. <i>Astrophysical Journal</i> , 2004, 609, 999-1017.	1.6	173
18	Magnetic Screening in Accreting Neutron Stars. <i>Astrophysical Journal</i> , 2001, 557, 958-966.	1.6	157

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19	Long Type I X-Ray Bursts and Neutron Star Interior Physics. <i>Astrophysical Journal</i> , 2006, 646, 429-451.	1.6	146
20	Disordered Nuclear Pasta, Magnetic Field Decay, and Crust Cooling in Neutron Stars. <i>Physical Review Letters</i> , 2015, 114, 031102.	2.9	135
21	Rotational Evolution during Type I X-Ray Bursts. <i>Astrophysical Journal</i> , 2000, 544, 453-474.	1.6	126
22	Constraining the initial entropy of directly detected exoplanets. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 437, 1378-1399.	1.6	121
23	Hall effect in neutron star crusts: evolution, endpoint and dependence on initial conditions. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 438, 1618-1629.	1.6	105
24	Helium-rich Thermonuclear Bursts and the Distance to the Accretion-powered Millisecond Pulsar SAX J1808.4-3658. <i>Astrophysical Journal</i> , 2006, 652, 559-568.	1.6	102
25	RADIATIVE HYDRODYNAMIC SIMULATIONS OF HD209458b: TEMPORAL VARIABILITY. <i>Astrophysical Journal</i> , 2010, 710, 1395-1407.	1.6	102
26	Periodic Thermonuclear X-Ray Bursts from GS 1826-24 and the Fuel Composition as a Function of Accretion Rate. <i>Astrophysical Journal</i> , 2004, 601, 466-473.	1.6	97
27	On the possibility of a helium white dwarf donor in the presumed ultracompact binary 2S 0918+549. <i>Astronomy and Astrophysics</i> , 2005, 441, 675-684.	2.1	95
28	Models of Type I X-Ray Bursts from GS 1826-24: A Probe of rp-Process Hydrogen Burning. <i>Astrophysical Journal</i> , 2007, 671, L141-L144.	1.6	93
29	Models of Type I X-Ray Bursts from 4U 1820+30. <i>Astrophysical Journal</i> , 2003, 595, 1077-1085.	1.6	88
30	Millihertz Quasi-periodic Oscillations from Marginally Stable Nuclear Burning on an Accreting Neutron Star. <i>Astrophysical Journal</i> , 2007, 665, 1311-1320.	1.6	72
31	OHMIC DISSIPATION IN THE INTERIORS OF HOT JUPITERS. <i>Astrophysical Journal</i> , 2012, 757, 47.	1.6	68
32	MILLIHERTZ QUASI-PERIODIC OSCILLATIONS AND THERMONUCLEAR BURSTS FROM TERZAN 5: A SHOWCASE OF BURNING REGIMES. <i>Astrophysical Journal</i> , 2012, 748, 82.	1.6	67
33	Photodisintegration-triggered Nuclear Energy Release in Superbursts. <i>Astrophysical Journal</i> , 2003, 583, L87-L90.	1.6	66
34	What ignites on the neutron star of 4U 0614+091?. <i>Astronomy and Astrophysics</i> , 2010, 514, A65.	2.1	65
35	Hall equilibria with toroidal and poloidal fields: application to neutron stars. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 434, 2480-2490.	1.6	64
36	POST-OUTBURST X-RAY FLUX AND TIMING EVOLUTION OF SWIFT J1822.3-1606. <i>Astrophysical Journal</i> , 2012, 761, 66.	1.6	62

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37	A STRONG SHALLOW HEAT SOURCE IN THE ACCRETING NEUTRON STAR MAXI J0556-332. <i>Astrophysical Journal Letters</i> , 2015, 809, L31.	3.0	62
38	Magnetic field evolution in accreting white dwarfs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2002, 333, 589-602.	1.6	61
39	Crystallization of classical multicomponent plasmas. <i>Physical Review E</i> , 2010, 81, 036107.	0.8	59
40	Hall Attractor in Axially Symmetric Magnetic Fields in Neutron Star Crusts. <i>Physical Review Letters</i> , 2014, 112, 171101.	2.9	58
41	First superburst from a classical low-mass X-ray binary transient. <i>Astronomy and Astrophysics</i> , 2008, 479, 177-188.	2.1	57
42	The Thermal Evolution following a Superburst on an Accreting Neutron Star. <i>Astrophysical Journal</i> , 2004, 603, L37-L40.	1.6	56
43	$^3\text{He}$ Transport in the Sun and the Solar Neutrino Problem. <i>Physical Review Letters</i> , 1996, 77, 4286-4289.	2.9	54
44	CONSTRAINTS ON NEUTRON STAR MASS AND RADIUS IN GS 1826-24 FROM SUB-EDDINGTON X-RAY BURSTS. <i>Astrophysical Journal</i> , 2012, 749, 69.	1.6	54
45	Physical and orbital properties of $\text{I}^2\text{Pictoris b}$ . <i>Astronomy and Astrophysics</i> , 2014, 567, L9.	2.1	54
46	Hall drift and the braking indices of young pulsars. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 446, 1121-1128.	1.6	54
47	Rapid Neutrino Cooling in the Neutron Star MXB 1659-29. <i>Physical Review Letters</i> , 2018, 120, 182701.	2.9	54
48	Intermediate long X-ray bursts from the ultra-compact binary candidate SLX 1737-282. <i>Astronomy and Astrophysics</i> , 2008, 484, 43-50.	2.1	52
49	THE LONG-TERM POST-OUTBURST SPIN DOWN AND FLUX RELAXATION OF MAGNETAR SWIFT J1822.3-1606. <i>Astrophysical Journal</i> , 2014, 786, 62.	1.6	51
50	CONTINUED COOLING OF THE CRUST IN THE NEUTRON STAR LOW-MASS X-RAY BINARY KS 1731-260. <i>Astrophysical Journal Letters</i> , 2010, 722, L137-L141.	3.0	50
51	Observatory science with eXTP. <i>Science China: Physics, Mechanics and Astronomy</i> , 2019, 62, 1.	2.0	50
52	Lower limit on the heat capacity of the neutron star core. <i>Physical Review C</i> , 2017, 95, .	1.1	49
53	Millihertz Oscillation Frequency Drift Predicts the Occurrence of Type I X-Ray Bursts. <i>Astrophysical Journal</i> , 2008, 673, L35-L38.	1.6	48
54	Radial Velocity Detectability of Low-Mass Extrasolar Planets in Close Orbits. <i>Astrophysical Journal</i> , 2005, 620, 1002-1009.	1.6	47

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55	Hot-start Giant Planets Form with Radiative Interiors. <i>Astrophysical Journal Letters</i> , 2017, 846, L17.	3.0	46
56	Hydrogen Electron Capture in Accreting Neutron Stars and the Resulting $g$ -Mode Oscillation Spectrum. <i>Astrophysical Journal</i> , 1998, 506, 842-862.	1.6	46
57	PROBING THE CRUST OF THE NEUTRON STAR IN EXO 0748-676. <i>Astrophysical Journal</i> , 2014, 791, 47.	1.6	45
58	THE EVOLUTION OF GAS GIANT ENTROPY DURING FORMATION BY RUNAWAY ACCRETION. <i>Astrophysical Journal</i> , 2017, 834, 149.	1.6	45
59	Thermonuclear X-ray bursts: theory vs. observations. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 2004, 132, 435-445.	0.5	44
60	Characterization of the gaseous companion $\rho$ Andromedae b. <i>Astronomy and Astrophysics</i> , 2014, 562, A111.	2.1	44
61	Superbursts at near-Eddington mass accretion rates. <i>Astronomy and Astrophysics</i> , 2004, 426, 257-265.	2.1	42
62	Magnetars: Time Evolution, Superfluid Properties, and the Mechanism of Magnetic Field Decay. <i>Astrophysical Journal</i> , 2004, 608, L49-L52.	1.6	41
63	Discovery of X-ray burst triplets in EXO 0748-676. <i>Astronomy and Astrophysics</i> , 2007, 465, 559-573.	2.1	41
64	An integrated analysis of radial velocities in planet searches. <i>Monthly Notices of the Royal Astronomical Society</i> , 2010, 401, 1029-1042.	1.6	41
65	Neutron star crust cooling in the Terzan 5 X-ray transient Swift J174805.3-244637. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 451, 2071-2081.	1.6	40
66	The challenge of forming a fuzzy core in Jupiter. <i>Astronomy and Astrophysics</i> , 2020, 638, A121.	2.1	40
67	A CHANGE IN THE QUIESCENT X-RAY SPECTRUM OF THE NEUTRON STAR LOW-MASS X-RAY BINARY MXB 1659-29. <i>Astrophysical Journal</i> , 2013, 774, 131.	1.6	39
68	Nuclear physics in normal X-ray bursts and superbursts. <i>Nuclear Physics A</i> , 2003, 718, 247-254.	0.6	35
69	Late-time Cooling of Neutron Star Transients and the Physics of the Inner Crust. <i>Astrophysical Journal</i> , 2017, 839, 95.	1.6	35
70	Glitch Rises as a Test for Rapid Superfluid Coupling in Neutron Stars. <i>Astrophysical Journal</i> , 2018, 865, 23.	1.6	34
71	Hydrostatic Expansion and Spin Changes during Type I X-ray Bursts. <i>Astrophysical Journal</i> , 2002, 564, 343-352.	1.6	33
72	SPECTRAL AND TIMING PROPERTIES OF THE MAGNETAR CXOU J164710.2-455216. <i>Astrophysical Journal</i> , 2013, 763, 82.	1.6	32

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73	COMPOSITIONALLY DRIVEN CONVECTION IN THE OCEANS OF ACCRETING NEUTRON STARS. <i>Astrophysical Journal</i> , 2011, 730, 97.	1.6	31
74	THE THERMAL STATE OF KS 1731+260 AFTER 14.5 YEARS IN QUIESCENCE. <i>Astrophysical Journal</i> , 2016, 833, 186.	1.6	31
75	Neon Cluster Formation and Phase Separation during White Dwarf Cooling. <i>Astrophysical Journal Letters</i> , 2020, 902, L44.	3.0	31
76	Superbursts from Strange Stars. <i>Astrophysical Journal</i> , 2005, 635, L157-L160.	1.6	30
77	A SIGNATURE OF CHEMICAL SEPARATION IN THE COOLING LIGHT CURVES OF TRANSIENTLY ACCRETING NEUTRON STARS. <i>Astrophysical Journal Letters</i> , 2014, 783, L3.	3.0	30
78	URCA COOLING PAIRS IN THE NEUTRON STAR OCEAN AND THEIR EFFECT ON SUPERBURSTS. <i>Astrophysical Journal</i> , 2016, 831, 13.	1.6	30
79	Theory of cooling neutron stars versus observations. <i>AIP Conference Proceedings</i> , 2008, , .	0.3	28
80	A superburst candidate in EXO 1745+248 as a challenge to thermonuclear ignition models. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 426, 927-934.	1.6	28
81	CHANDRA OBSERVATIONS OF SGR 1627+41 NEAR QUIESCENCE. <i>Astrophysical Journal</i> , 2012, 757, 68.	1.6	28
82	The imprint of the protoplanetary disc in the accretion of super-Earth envelopes. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 494, 2440-2448.	1.6	25
83	The endpoint of the rp-process on accreting neutron stars. <i>Nuclear Physics A</i> , 2001, 688, 150-153.	0.6	24
84	SHEDDING LIGHT ON THE ECCENTRICITY VALLEY: GAP HEATING AND ECCENTRICITY EXCITATION OF GIANT PLANETS IN PROTOPLANETARY DISKS. <i>Astrophysical Journal</i> , 2014, 782, 113.	1.6	24
85	Different Accretion Heating of the Neutron Star Crust during Multiple Outbursts in MAXI J0556+332. <i>Astrophysical Journal Letters</i> , 2017, 851, L28.	3.0	24
86	Direct molecular dynamics simulation of liquid-solid phase equilibria for a three-component plasma. <i>Physical Review E</i> , 2012, 86, 066413.	0.8	22
87	Detection of burning ashes from thermonuclear X-ray bursts. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2017, 464, L6-L10.	1.2	21
88	Long tails on thermonuclear X-ray bursts from neutron stars: a signature of inward heating?. <i>Astronomy and Astrophysics</i> , 2009, 497, 469-480.	2.1	20
89	Consistent accretion-induced heating of the neutron-star crust in MXB 1659+29 during two different outbursts. <i>Astronomy and Astrophysics</i> , 2019, 624, A84.	2.1	19
90	Latitudinal Shear Instabilities during Type I X-ray Bursts. <i>Astrophysical Journal</i> , 2005, 630, 441-453.	1.6	18

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91	Polycrystalline Crusts in Accreting Neutron Stars. <i>Astrophysical Journal</i> , 2018, 860, 148.	1.6	18
92	A Bayesian approach to matching thermonuclear X-ray burst observations with models. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 490, 2228-2240.	1.6	18
93	The new intermediate long-bursting source XTE J1701-407. <i>Astronomy and Astrophysics</i> , 2009, 496, 333-342.	2.1	17
94	TIME-DEPENDENT, COMPOSITIONALLY DRIVEN CONVECTION IN THE OCEANS OF ACCRETING NEUTRON STARS. <i>Astrophysical Journal</i> , 2015, 802, 29.	1.6	17
95	The primordial entropy of Jupiter. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 477, 4817-4823.	1.6	17
96	The cooling rate of neutron stars after thermonuclear shell flashes. <i>Astronomy and Astrophysics</i> , 2014, 562, A16.	2.1	17
97	Magnetic field evolution in neutron stars. <i>Astronomische Nachrichten</i> , 2007, 328, 1173-1177.	0.6	16
98	CARBON SYNTHESIS IN STEADY-STATE HYDROGEN AND HELIUM BURNING ON ACCRETING NEUTRON STARS. <i>Astrophysical Journal</i> , 2014, 791, 106.	1.6	16
99	The link between coherent burst oscillations, burst spectral evolution and accretion state in 4U 1728+34. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 455, 2004-2017.	1.6	16
100	A SURVEY OF CHEMICAL SEPARATION IN ACCRETING NEUTRON STARS. <i>Astrophysical Journal</i> , 2016, 823, 117.	1.6	14
101	Superbursts: A New Probe of the rp-Process. <i>Nuclear Physics A</i> , 2005, 758, 439-446.	0.6	13
102	The imprint of carbon combustion on a superburst from the accreting neutron star 4U 1636+536. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 454, 3559-3566.	1.6	13
103	Cooling Delays from Iron Sedimentation and Iron Inner Cores in White Dwarfs. <i>Astrophysical Journal Letters</i> , 2021, 919, L12.	3.0	13
104	AN ACCURATE DETERMINATION OF THE OPTICAL PERIODIC MODULATION IN THE X-RAY BINARY SAX J1808.4-3658. <i>Astrophysical Journal</i> , 2009, 694, 1115-1120.	1.6	12
105	Predictions of Planet Detections with Near-infrared Radial Velocities in the Upcoming SPIRou Legacy Survey-planet Search. <i>Astronomical Journal</i> , 2018, 155, 93.	1.9	11
106	Penetration of a cooling convective layer into a stably-stratified composition gradient: Entrainment at low Prandtl number. <i>Physical Review Fluids</i> , 2020, 5, .	1.0	11
107	The thermal stability of helium burning on accreting neutron stars. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 445, 3278-3288.	1.6	9
108	The LOFT mission concept: a status update. <i>Proceedings of SPIE</i> , 2016, , .	0.8	9

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109	The effect of diffusive nuclear burning in neutron star envelopes on cooling in accreting systems. Monthly Notices of the Royal Astronomical Society, 2020, 493, 4936-4944.	1.6	9
110	The superburst recurrence time in luminous persistent LMXBs. Astronomy and Astrophysics, 2006, 455, 1031-1036.	2.1	9
111	Mixed H/He bursts in SAX J1748.9â€“2021 during the spectral change of its 2015 outburst. Astronomy and Astrophysics, 2018, 620, A114.	2.1	8
112	Magnetic Field Evolution in Accreting Millisecond Pulsars. , 2008, , .		7
113	Accreting neutron star spins and the equation of state. AIP Conference Proceedings, 2008, , .	0.3	6
114	Flux decay during thermonuclear X-ray bursts analysed with the dynamic power-law index method. Astronomy and Astrophysics, 2017, 604, A77.	2.1	5
115	Deep crustal heating by neutrinos from the surface of accreting neutron stars. Physical Review C, 2018, 98, .	1.1	5
116	Expanded Atmospheres and Winds in Type I X-Ray Bursts from Accreting Neutron Stars. Astrophysical Journal, 2021, 914, 49.	1.6	5
117	The effect of late giant collisions on the atmospheres of protoplanets and the formation of cold sub-Saturns. Monthly Notices of the Royal Astronomical Society, 2021, 509, 1413-1431.	1.6	5
118	Flux Relaxation after Two Outbursts of the Magnetar SGR 1627â€“41 and Possible Hard X-Ray Emission. Astrophysical Journal, 2018, 859, 16.	1.6	4
119	SAX J1808.4-3657 in Quiescence: A Keystone for Neutron Star Science. AIP Conference Proceedings, 2008, , .	0.3	3
120	Shear flows and their suppression at large aspect ratio: Two-dimensional simulations of a growing convection zone. Physical Review Fluids, 2021, 6, .	1.0	3
121	Thermonuclear burst physics with RXTE. AIP Conference Proceedings, 2004, , .	0.3	2
122	Proton captures in the atmosphere of accreting neutron stars. AIP Conference Proceedings, 2000, , .	0.3	1
123	Proton Captures in the Atmosphere of Accreting Neutron Stars. , 2002, , 153-163.		0
124	Magnetic Field Evolution in Accreting White Dwarfs. International Astronomical Union Colloquium, 2004, 190, 58-70.	0.1	0
125	What can we learn from long term monitoring of X-ray bursters?. AIP Conference Proceedings, 2006, , .	0.3	0
126	The new magnetar Swift J1822.3â€“1606. Proceedings of the International Astronomical Union, 2012, 8, 486-488.	0.0	0



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127	Hall Effect in Neutron Star Crusts. Proceedings of the International Astronomical Union, 2013, 9, 415-418.	0.0	0
128	Magnetic Field Evolution in Accreting White Dwarfs. , 2003, , 183-186.		0
129	THE IMPORTANCE OF THE RP-PROCESS IN THERMONUCLEAR BURNING ON ACCRETING NEUTRON STARS. , 2007, , .		0