# Andrew Cumming

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5427505/publications.pdf

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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 | Expanded Atmospheres and Winds in Type I X-Ray Bursts from Accreting Neutron Stars. Astrophysical Journal, 2021, 914, 49. | 1.6 | 5 |
| 2 | 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 |
| 3 | Cooling Delays from Iron Sedimentation and Iron Inner Cores in White Dwarfs. Astrophysical Journal Letters, 2021, 919, L12. | 3.0 | 13 |
| 4 | 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 |
| 5 | The challenge of forming a fuzzy core in Jupiter. Astronomy and Astrophysics, 2020, 638, A121. | 2.1 | 40 |
| 6 | The imprint of the protoplanetary disc in the accretion of super-Earth envelopes. Monthly Notices of the Royal Astronomical Society, 2020, 494, 2440-2448. | 1.6 | 25 |
| 7 | 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 |
| 8 | Penetration of a cooling convective layer into a stably-stratified composition gradient: Entrainment at low Prandtl number. Physical Review Fluids, 2020, 5, . | 1.0 | 11 |
| 9 | Neon Cluster Formation and Phase Separation during White Dwarf Cooling. Astrophysical Journal Letters, 2020, 902, L44. | 3.0 | 31 |
| 10 | A Bayesian approach to matching thermonuclear X-ray burst observations with models. Monthly Notices of the Royal Astronomical Society, 2019, 490, 2228-2240. | 1.6 | 18 |
| 11 | Consistent accretion-induced heating of the neutron-star crust in MXB 1659â˜29 during two different outbursts. Astronomy and Astrophysics, 2019, 624, A84. | 2.1 | 19 |
| 12 | Observatory science with eXTP. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1. | 2.0 | 50 |
| 13 | Predictions of Planet Detections with Near-infrared Radial Velocities in the Upcoming SPIRou Legacy Survey-planet Search. Astronomical Journal, 2018, 155, 93. | 1.9 | 11 |
| 14 | 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>. Astronomical Journal, 2018, 155, 48. | 1.9 | 239 |
| 15 | Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2018, 21, 3. | 8.2 | 808 |
| 16 | Rapid Neutrino Cooling in the Neutron Star MXB 1659-29. Physical Review Letters, 2018, 120, 182701. | 2.9 | 54 |
| 17 | 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 |
| 18 | Deep crustal heating by neutrinos from the surface of accreting neutron stars. Physical Review C, 2018, 98, . | 1.1 | 5 |

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| 19 | Glitch Rises as a Test for Rapid Superfluid Coupling in Neutron Stars. Astrophysical Journal, 2018, 865, 23. | 1.6 | 34 |
| 20 | Polycrystalline Crusts in Accreting Neutron Stars. Astrophysical Journal, 2018, 860, 148. | 1.6 | 18 |
| 21 | 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 |
| 22 | The primordial entropy of Jupiter. Monthly Notices of the Royal Astronomical Society, 2018, 477, 4817-4823. | 1.6 | 17 |
| 23 | Exploring the sensitivity of next generation gravitational wave detectors. Classical and Quantum Gravity, 2017, 34, 044001. | 1.5 | 735 |
| 24 | Lower limit on the heat capacity of the neutron star core. Physical Review C, 2017, 95, . | 1.1 | 49 |
| 25 | Late-time Cooling of Neutron Star Transients and the Physics of the Inner Crust. Astrophysical Journal, 2017, 839, 95. | 1.6 | 35 |
| 26 | GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. Physical Review Letters, 2017, 119, 141101. | 2.9 | 1,600 |
| 27 | GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral. Physical Review Letters, 2017, 119, 161101. | 2.9 | 6,413 |
| 28 | Hot-start Giant Planets Form with Radiative Interiors. Astrophysical Journal Letters, 2017, 846, L17. | 3.0 | 46 |
| 29 | Detection of burning ashes from thermonuclear X-ray bursts. Monthly Notices of the Royal Astronomical Society: Letters, 2017, 464, L6-L10. | 1.2 | 21 |
| 30 | THE EVOLUTION OF GAS GIANT ENTROPY DURING FORMATION BY RUNAWAY ACCRETION. Astrophysical Journal, 2017, 834, 149. | 1.6 | 45 |
| 31 | GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2. Physical Review Letters, 2017, 118, 221101. | 2.9 | 1,987 |
| 32 | Different Accretion Heating of the Neutron Star Crust during Multiple Outbursts in MAXI J0556â€“332. Astrophysical Journal Letters, 2017, 851, L28. | 3.0 | 24 |
| 33 | Flux decay during thermonuclear X-ray bursts analysed with the dynamic power-law index method. Astronomy and Astrophysics, 2017, 604, A77. | 2.1 | 5 |
| 34 | A SURVEY OF CHEMICAL SEPARATION IN ACCRETING NEUTRON STARS. Astrophysical Journal, 2016, 823, 117. | 1.6 | 14 |
| 35 | URCA COOLING PAIRS IN THE NEUTRON STAR OCEAN AND THEIR EFFECT ON SUPERBURSTS. Astrophysical Journal, 2016, 831, 13. | 1.6 | 30 |
| 36 | THE THERMAL STATE OF KS 1731â˜’260 AFTER 14.5 YEARS IN QUIESCENCE. Astrophysical Journal, 2016, 833, 186. | 1.6 | 31 |

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| 37 | GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. Physical Review Letters, 2016, 116, 241103. | 2.9 | 2,701 |
| 38 | The LOFT mission concept: a status update. Proceedings of SPIE, 2016, , . | 0.8 | 9 |
| 39 | The link between coherent burst oscillations, burst spectral evolution and accretion state in 4U 1728â€“34. Monthly Notices of the Royal Astronomical Society, 2016, 455, 2004-2017. | 1.6 | 16 |
| 40 | Observation of Gravitational Waves from a Binary Black Hole Merger. Physical Review Letters, 2016, 116, 061102. | 2.9 | 8,753 |
| 41 | The imprint of carbon combustion on a superburst from the accreting neutron star 4UÂ1636â˜536. Monthly Notices of the Royal Astronomical Society, 2015, 454, 3559-3566. | 1.6 | 13 |
| 42 | A STRONG SHALLOW HEAT SOURCE IN THE ACCRETING NEUTRON STAR MAXI J0556-332. Astrophysical Journal Letters, 2015, 809, L31. | 3.0 | 62 |
| 43 | Neutron star crust cooling in the Terzan 5 X-ray transient SwiftÂJ174805.3â€“244637. Monthly Notices of the Royal Astronomical Society, 2015, 451, 2071-2081. | 1.6 | 40 |
| 44 | Disordered Nuclear Pasta, Magnetic Field Decay, and Crust Cooling in Neutron Stars. Physical Review Letters, 2015, 114, 031102. | 2.9 | 135 |
| 45 | TIME-DEPENDENT, COMPOSITIONALLY DRIVEN CONVECTION IN THE OCEANS OF ACCRETING NEUTRON STARS. Astrophysical Journal, 2015, 802, 29. | 1.6 | 17 |
| 46 | Hall drift and the braking indices of young pulsars. Monthly Notices of the Royal Astronomical Society, 2015, 446, 1121-1128. | 1.6 | 54 |
| 47 | Hall effect in neutron star crusts: evolution, endpoint and dependence on initial conditions. Monthly Notices of the Royal Astronomical Society, 2014, 438, 1618-1629. | 1.6 | 105 |
| 48 | The thermal stability of helium burning on accreting neutron stars. Monthly Notices of the Royal Astronomical Society, 2014, 445, 3278-3288. | 1.6 | 9 |
| 49 | Hall Attractor in Axially Symmetric Magnetic Fields in Neutron Star Crusts. Physical Review Letters, 2014, 112, 171101. | 2.9 | 58 |
| 50 | A SIGNATURE OF CHEMICAL SEPARATION IN THE COOLING LIGHT CURVES OF TRANSIENTLY ACCRETING NEUTRON STARS. Astrophysical Journal Letters, 2014, 783, L3. | 3.0 | 30 |
| 51 | CARBON SYNTHESIS IN STEADY-STATE HYDROGEN AND HELIUM BURNING ON ACCRETING NEUTRON STARS. Astrophysical Journal, 2014, 791, 106. | 1.6 | 16 |
| 52 | SHEDDING LIGHT ON THE ECCENTRICITY VALLEY: GAP HEATING AND ECCENTRICITY EXCITATION OF GIANT PLANETS IN PROTOPLANETARY DISKS. Astrophysical Journal, 2014, 782, 113. | 1.6 | 24 |
| 53 | PROBING THE CRUST OF THE NEUTRON STAR IN EXO 0748-676. Astrophysical Journal, 2014, 791, 47. | 1.6 | 45 |
| 54 | Constraining the initial entropy of directly detected exoplanets. Monthly Notices of the Royal Astronomical Society, 2014, 437, 1378-1399. | 1.6 | 121 |

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| 55 | THE LONG-TERM POST-OUTBURST SPIN DOWN AND FLUX RELAXATION OF MAGNETAR SWIFT J1822.3â€“1606. Astrophysical Journal, 2014, 786, 62. | 1.6 | 51 |
| 56 | Characterization of the gaseous companionÎ²Andromedae b. Astronomy and Astrophysics, 2014, 562, A111. | 2.1 | 44 |
| 57 | Physical and orbital properties ofÎ²Pictoris b. Astronomy and Astrophysics, 2014, 567, L9. | 2.1 | 54 |
| 58 | The cooling rate of neutron stars after thermonuclear shell flashes. Astronomy and Astrophysics, 2014, 562, A16. | 2.1 | 17 |
| 59 | Hall equilibria with toroidal and poloidal fields: application to neutron stars. Monthly Notices of the Royal Astronomical Society, 2013, 434, 2480-2490. | 1.6 | 64 |
| 60 | A CHANGE IN THE QUIESCENT X-RAY SPECTRUM OF THE NEUTRON STAR LOW-MASS X-RAY BINARY MXB 1659â€“29. Astrophysical Journal, 2013, 774, 131. | 1.6 | 39 |
| 61 | SPECTRAL AND TIMING PROPERTIES OF THE MAGNETAR CXOU J164710.2â€“455216. Astrophysical Journal, 2013, 763, 82. | 1.6 | 32 |
| 62 | Hall Effect in Neutron Star Crusts. Proceedings of the International Astronomical Union, 2013, 9, 415-418. | 0.0 | 0 |
| 63 | POST-OUTBURST X-RAY FLUX AND TIMING EVOLUTION OF SWIFT J1822.3â€“1606. Astrophysical Journal, 2012, 761, 66. | 1.6 | 62 |
| 64 | The new magnetar Swift J1822.3â€“1606. Proceedings of the International Astronomical Union, 2012, 8, 486-488. | 0.0 | 0 |
| 65 | OHMIC DISSIPATION IN THE INTERIORS OF HOT JUPITERS. Astrophysical Journal, 2012, 757, 47. | 1.6 | 68 |
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| 67 | Direct molecular dynamics simulation of liquid-solid phase equilibria for a three-component plasma. Physical Review E, 2012, 86, 066413. | 0.8 | 22 |
| 68 | CHANDRAOBSERVATIONS OF SGR 1627â€“41 NEAR QUIESCENCE. Astrophysical Journal, 2012, 757, 68. | 1.6 | 28 |
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| 70 | MILLIHERTZ QUASI-PERIODIC OSCILLATIONS AND THERMONUCLEAR BURSTS FROM TERZAN 5: A SHOWCASE OF BURNING REGIMES. Astrophysical Journal, 2012, 748, 82. | 1.6 | 67 |
| 71 | COMPOSITIONALLY DRIVEN CONVECTION IN THE OCEANS OF ACCRETING NEUTRON STARS. Astrophysical Journal, 2011, 730, 97. | 1.6 | 31 |
| 72 | CONTINUED COOLING OF THE CRUST IN THE NEUTRON STAR LOW-MASS X-RAY BINARY KS 1731â€“260. Astrophysical Journal Letters, 2010, 722, L137-L141. | 3.0 | 50 |

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| 73 | An integrated analysis of radial velocities in planet searches. Monthly Notices of the Royal Astronomical Society, 2010, 401, 1029-1042. | 1.6 | 41 |
| 74 | RADIATIVE HYDRODYNAMIC SIMULATIONS OF HD209458b: TEMPORAL VARIABILITY. Astrophysical Journal, 2010, 710, 1395-1407. | 1.6 | 102 |
| 75 | Crystallization of classical multicomponent plasmas. Physical Review E, 2010, 81, 036107. | 0.8 | 59 |
| 76 | What ignites on the neutron star of 4Uâ€‰0614+091?. Astronomy and Astrophysics, 2010, 514, A65. | 2.1 | 65 |
| 77 | MAPPING CRUSTAL HEATING WITH THE COOLING LIGHT CURVES OF QUASI-PERSISTENT TRANSIENTS. Astrophysical Journal, 2009, 698, 1020-1032. | 1.6 | 212 |
| 78 | Long tails on thermonuclear X-ray bursts from neutron stars: a signature of inward heating?. Astronomy and Astrophysics, 2009, 497, 469-480. | 2.1 | 20 |
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| 80 | The new intermediate long-bursting source XTEÂJ1701-407. Astronomy and Astrophysics, 2009, 496, 333-342. | 2.1 | 17 |
| 81 | Theory of cooling neutron stars versus observations. AIP Conference Proceedings, 2008, , . | 0.3 | 28 |
| 82 | The Keck Planet Search: Detectability and the Minimum Mass and Orbital Period Distribution of Extrasolar Planets. Publications of the Astronomical Society of the Pacific, 2008, 120, 531-554. | 1.0 | 711 |
| 83 | Magnetic Field Evolution in Accreting Millisecond Pulsars. , 2008, , . | | 7 |
| 84 | Accreting neutron star spins and the equation of state. AIP Conference Proceedings, 2008, , . | 0.3 | 6 |
| 85 | SAX J1808.4-3657 in Quiescence: A Keystone for Neutron Star Science. AIP Conference Proceedings, 2008, , . | 0.3 | 3 |
| 86 | Millihertz Oscillation Frequency Drift Predicts the Occurrence of Type I X-Ray Bursts. Astrophysical Journal, 2008, 673, L35-L38. | 1.6 | 48 |
| 87 | First superburst from a classical low-mass X-ray binary transient. Astronomy and Astrophysics, 2008, 479, 177-188. | 2.1 | 57 |
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| 89 | Millihertz Quasiâ€periodic Oscillations from Marginally Stable Nuclear Burning on an Accreting Neutron Star. Astrophysical Journal, 2007, 665, 1311-1320. | 1.6 | 72 |
| 90 | Models of Type I X-Ray Bursts from GS 1826-24: A Probe of rp-Process Hydrogen Burning. Astrophysical Journal, 2007, 671, L141-L144. | 1.6 | 93 |

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| 91 | Discovery of X-ray burst triplets in EXOâ€‰0748-676. Astronomy and Astrophysics, 2007, 465, 559-573. | 2.1 | 41 |
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| 103 | Magnetic Field Evolution in Accreting White Dwarfs. International Astronomical Union Colloquium, 2004, 190, 58-70. | 0.1 | 0 |
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| 105 | Models for Type I Xâ€Ray Bursts with Improved Nuclear Physics. Astrophysical Journal, Supplement Series, 2004, 151, 75-102. | 3.0 | 286 |
| 106 | Magnetic Field Evolution in Neutron Star Crusts Due to the Hall Effect and Ohmic Decay. Astrophysical Journal, 2004, 609, 999-1017. | 1.6 | 173 |
| 107 | Thermonuclear burst physics with RXTE. AIP Conference Proceedings, 2004, , . | 0.3 | 2 |
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| 110 | Magnetars: Time Evolution, Superfluid Properties, and the Mechanism of Magnetic Field Decay. Astrophysical Journal, 2004, 608, L49-L52. | 1.6 | 41 |
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| 112 | Periodic Thermonuclear Xâ€Ray Bursts from GS 1826â˜'24 and the Fuel Composition as a Function of Accretion Rate. Astrophysical Journal, 2004, 601, 466-473. | 1.6 | 97 |
| 113 | Nuclear physics in normal X-ray bursts and superblasts. Nuclear Physics A, 2003, 718, 247-254. | 0.6 | 35 |
| 114 | Models of Type I Xâ€Ray Bursts from 4U 1820â˜'30. Astrophysical Journal, 2003, 595, 1077-1085. | 1.6 | 88 |
| 115 | Photodisintegration-triggered Nuclear Energy Release in Superbursts. Astrophysical Journal, 2003, 583, L87-L90. | 1.6 | 66 |
| 116 | Magnetic Field Evolution in Accreting White Dwarfs. , 2003, , 183-186. | | 0 |
| 117 | Hydrostatic Expansion and Spin Changes during Type I Xâ€Ray Bursts. Astrophysical Journal, 2002, 564, 343-352. | 1.6 | 33 |
| 118 | Proton Captures in the Atmosphere of Accreting Neutron Stars. , 2002, , 153-163. | | 0 |
| 119 | Magnetic field evolution in accreting white dwarfs. Monthly Notices of the Royal Astronomical Society, 2002, 333, 589-602. | 1.6 | 61 |
| 120 | The endpoint of the rp-process on accreting neutron stars. Nuclear Physics A, 2001, 688, 150-153. | 0.6 | 24 |
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| 122 | Magnetic Screening in Accreting Neutron Stars. Astrophysical Journal, 2001, 557, 958-966. | 1.6 | 157 |
| 123 | Carbon Flashes in the Heavy-Element Ocean on Accreting Neutron Stars. Astrophysical Journal, 2001, 559, L127-L130. | 1.6 | 195 |
| 124 | Proton captures in the atmosphere of accreting neutron stars. AIP Conference Proceedings, 2000, , . | 0.3 | 1 |
| 125 | Rotational Evolution during Type I Xâ€Ray Bursts. Astrophysical Journal, 2000, 544, 453-474. | 1.6 | 126 |
| 126 | The Rapid Proton Process Ashes from Stable Nuclear Burning on an Accreting Neutron Star. Astrophysical Journal, 1999, 524, 1014-1029. | 1.6 | 198 |

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| 127 | The Lick Planet Search: Detectability and Mass Thresholds. Astrophysical Journal, 1999, 526, 890-915. | 1.6 | 314 |
| 128 | Hydrogen Electron Capture in Accreting Neutron Stars and the Resultinggâ€Mode Oscillation Spectrum. Astrophysical Journal, 1998, 506, 842-862. | 1.6 | 46 |
| 129 | 3HeTransport in the Sun and the Solar Neutrino Problem. Physical Review Letters, 1996, 77, 4286-4289. | 2.9 | 54 |