

Tom Abel

List of Publications by Year in descending order

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Version: 2024-02-01

120
papers

15,884
citations

15504

65
h-index

20961

115
g-index

121
all docs

121
docs citations

121
times ranked

5983
citing authors

#	ARTICLE	IF	CITATIONS
1	Modelling nearest neighbour distributions of biased tracers using hybrid effective field theory. Monthly Notices of the Royal Astronomical Society, 2022, 511, 2765-2781.	4.4	13
2	Single classical field description of interacting scalar fields. Physical Review D, 2022, 105, .	4.7	5
3	Detection of spatial clustering in the 1000 richest SDSS DR8 redMaPPer clusters with nearest neighbor distributions. Monthly Notices of the Royal Astronomical Society, 2022, 514, 3828-3843.	4.4	6
4	First Star Formation in the Presence of Primordial Magnetic Fields. Astrophysical Journal Letters, 2021, 909, L21.	8.3	5
5	Cosmological cross-correlations and nearest neighbour distributions. Monthly Notices of the Royal Astronomical Society, 2021, 504, 2911-2923.	4.4	24
6	The AGORA High-resolution Galaxy Simulations Comparison Project. III. Cosmological Zoom-in Simulation of a Milky Way-mass Halo. Astrophysical Journal, 2021, 917, 64.	4.5	12
7	Field moment expansion method for interacting bosonic systems. Physical Review D, 2021, 104, .	4.7	4
8	Self-similarity of k -nearest neighbour distributions in scale-free simulations. Monthly Notices of the Royal Astronomical Society, 2021, 509, 2281-2288.	4.4	4
9	Nonthermal electron and ion acceleration by magnetic reconnection in large laser-driven plasmas. Physics of Plasmas, 2020, 27, 112111.	1.9	3
10	Investigating the use of field solvers for simulating classical systems. Physical Review D, 2020, 101, .	4.7	7
11	Nearest neighbour distributions: New statistical measures for cosmological clustering. Monthly Notices of the Royal Astronomical Society, 2020, 500, 5479-5499.	4.4	52
12	BAM: bias assignment method to generate mock catalogues. Monthly Notices of the Royal Astronomical Society: Letters, 2019, 483, L58-L63.	3.3	23
13	High-redshift Galaxy Formation with Self-consistently Modeled Stars and Massive Black Holes: Stellar Feedback and Quasar Growth. Astrophysical Journal, 2019, 887, 120.	4.5	11
14	ENZO: An Adaptive Mesh Refinement Code for Astrophysics (Version 2.6). Journal of Open Source Software, 2019, 4, 1636.	4.6	44
15	Comparing fully general relativistic and Newtonian calculations of structure formation. Physical Review D, 2018, 97, .	4.7	33
16	Tracing the cosmic web. Monthly Notices of the Royal Astronomical Society, 2018, 473, 1195-1217.	4.4	187
17	Reducing noise in cosmological N-body simulations with neutrinos. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 028-028.	5.4	42
18	A new method for analyzing and visualizing plasma simulations using a phase-space tessellation. Physics of Plasmas, 2018, 25, .	1.9	1

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19	Particle acceleration in laser-driven magnetic reconnection. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	18
20	Doppler effect on indirect detection of dark matter using dark matter only simulations. <i>Physical Review D</i> , 2017, 95, .	4.7	14
21	grackle: a chemistry and cooling library for astrophysics. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 466, 2217-2234.	4.4	201
22	Ab Initio Simulations of a Supernova-driven Galactic Dynamo in an Isolated Disk Galaxy. <i>Astrophysical Journal</i> , 2017, 843, 113.	4.5	37
23	Voids in cosmological simulations over cosmic time. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 458, 4431-4442.	4.4	26
24	Nonthermal Electron Energization from Magnetic Reconnection in Laser-Driven Plasmas. <i>Physical Review Letters</i> , 2016, 116, 095003.	7.8	25
25	THE AGORA HIGH-RESOLUTION GALAXY SIMULATIONS COMPARISON PROJECT. II. ISOLATED DISK TEST. <i>Astrophysical Journal</i> , 2016, 833, 202.	4.5	88
26	The properties of cosmic velocity fields. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 454, 3920-3937.	4.4	79
27	An exact general remeshing scheme applied to physically conservative voxelization. <i>Journal of Computational Physics</i> , 2015, 297, 340-356.	3.8	40
28	COLD ACCRETION IN EARLY GALAXY FORMATION AND ITS α SIGNATURES. <i>Astrophysical Journal</i> , 2015, 801, 52.	4.5	18
29	Towards noiseless gravitational lensing simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 444, 2925-2937.	4.4	16
30	ENZO: AN ADAPTIVE MESH REFINEMENT CODE FOR ASTROPHYSICS. <i>Astrophysical Journal, Supplement Series</i> , 2014, 211, 19.	7.7	615
31	THE AGORA HIGH-RESOLUTION GALAXY SIMULATIONS COMPARISON PROJECT. <i>Astrophysical Journal, Supplement Series</i> , 2014, 210, 14.	7.7	185
32	REIONIZATION HISTORIES OF MILKY WAY MASS HALOS. <i>Astrophysical Journal</i> , 2014, 785, 134.	4.5	10
33	The birth of a galaxy – III. Propelling reionization with the faintest galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 442, 2560-2579.	4.4	321
34	Escape of Ly α and continuum photons from star-forming galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 440, 776-786.	4.4	59
35	Small-scale primordial magnetic fields and anisotropies in the cosmic microwave background radiation. <i>Journal of Cosmology and Astroparticle Physics</i> , 2013, 2013, 050-050.	5.4	22
36	A new approach to simulating collisionless dark matter fluids. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 434, 1171-1191.	4.4	78

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37	The warm dark matter halo mass function below the cut-off scale. Monthly Notices of the Royal Astronomical Society, 2013, 434, 3337-3347.	4.4	134
38	DWARF GALAXIES WITH IONIZING RADIATION FEEDBACK. II. SPATIALLY RESOLVED STAR FORMATION RELATION. Astrophysical Journal, 2013, 779, 8.	4.5	24
39	How closely do baryons follow dark matter on large scales?. Monthly Notices of the Royal Astronomical Society, 2013, 434, 1756-1764.	4.4	44
40	DWARF GALAXIES WITH IONIZING RADIATION FEEDBACK. I. ESCAPE OF IONIZING PHOTONS. Astrophysical Journal, 2013, 775, 109.	4.5	35
41	WERE PROGENITORS OF LOCAL L^* GALAXIES $\text{Ly}\alpha$ EMITTERS AT HIGH REDSHIFT?. Astrophysical Journal, 2012, 754, 118.	4.5	39
42	THE EFFECT OF ABSORPTION SYSTEMS ON COSMIC REIONIZATION. Astrophysical Journal, 2012, 747, 126.	4.5	53
43	MAGNETIC FIELDS IN POPULATION III STAR FORMATION. Astrophysical Journal, 2012, 745, 154.	4.5	134
44	THE BIRTH OF A GALAXY: PRIMORDIAL METAL ENRICHMENT AND STELLAR POPULATIONS. Astrophysical Journal, 2012, 745, 50.	4.5	357
45	A Novel Approach to Visualizing Dark Matter Simulations. IEEE Transactions on Visualization and Computer Graphics, 2012, 18, 2078-2087.	4.4	23
46	Tracing the dark matter sheet in phase space. Monthly Notices of the Royal Astronomical Society, 2012, 427, 61-76.	4.4	132
47	The birth of a galaxy II. The role of radiation pressure. Monthly Notices of the Royal Astronomical Society, 2012, 427, 311-326.	4.4	147
48	ART2: coupling $\text{Ly}\alpha$ line and multi-wavelength continuum radiative transfer. Monthly Notices of the Royal Astronomical Society, 2012, 424, 884-901.	4.4	60
49	yt: A MULTI-CODE ANALYSIS TOOLKIT FOR ASTROPHYSICAL SIMULATION DATA. Astrophysical Journal, Supplement Series, 2011, 192, 9.	7.7	959
50	EFFECTS OF VARYING THE THREE-BODY MOLECULAR HYDROGEN FORMATION RATE IN PRIMORDIAL STAR FORMATION. Astrophysical Journal, 2011, 726, 55.	4.5	58
51	GALAXY FORMATION WITH SELF-CONSISTENTLY MODELED STARS AND MASSIVE BLACK HOLES. I. FEEDBACK-REGULATED STAR FORMATION AND BLACK HOLE GROWTH. Astrophysical Journal, 2011, 738, 54.	4.5	79
52	rpSPH: a novel smoothed particle hydrodynamics algorithm. Monthly Notices of the Royal Astronomical Society, 2011, 413, 271-285.	4.4	55
53	enzo+moray: radiation hydrodynamics adaptive mesh refinement simulations with adaptive ray tracing. Monthly Notices of the Royal Astronomical Society, 2011, 414, 3458-3491.	4.4	145
54	Multi-scale initial conditions for cosmological simulations. Monthly Notices of the Royal Astronomical Society, 2011, 415, 2101-2121.	4.4	591

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55	COMPARING NUMERICAL METHODS FOR ISOTHERMAL MAGNETIZED SUPERSONIC TURBULENCE. <i>Astrophysical Journal</i> , 2011, 737, 13.	4.5	105
56	OUTFLOW FEEDBACK REGULATED MASSIVE STAR FORMATION IN PARSEC-SCALE CLUSTER-FORMING CLUMPS. <i>Astrophysical Journal</i> , 2010, 709, 27-41.	4.5	307
57	Population III Binary Formation. , 2010, , .		0
58	HIGH-ENTROPY POLAR REGIONS AROUND THE FIRST PROTOSTARS. <i>Astrophysical Journal Letters</i> , 2010, 725, L140-L144.	8.3	15
59	LOWERING THE CHARACTERISTIC MASS OF CLUSTER STARS BY MAGNETIC FIELDS AND OUTFLOW FEEDBACK. <i>Astrophysical Journal Letters</i> , 2010, 720, L26-L30.	8.3	43
60	THE IMPACT OF INHOMOGENEOUS REIONIZATION ON THE SATELLITE GALAXY POPULATION OF THE MILKY WAY. <i>Astrophysical Journal</i> , 2010, 710, 408-420.	4.5	93
61	Adaptive mesh fluid simulations on GPU. <i>New Astronomy</i> , 2010, 15, 581-589.	1.8	66
62	Computational Eulerian hydrodynamics and Galilean invariance. <i>Monthly Notices of the Royal Astronomical Society</i> , 2010, 401, 2463-2476.	4.4	79
63	ACCRETION ONTO THE FIRST STELLAR-MASS BLACK HOLES. <i>Astrophysical Journal</i> , 2009, 701, L133-L137.	4.5	218
64	CONNECTING REIONIZATION TO THE LOCAL UNIVERSE. <i>Astrophysical Journal</i> , 2009, 703, L167-L171.	4.5	58
65	GALAXY MERGERS WITH ADAPTIVE MESH REFINEMENT: STAR FORMATION AND HOT GAS OUTFLOW. <i>Astrophysical Journal</i> , 2009, 694, L123-L127.	4.5	44
66	MAGNETOHYDRODYNAMIC SIMULATIONS OF DISK GALAXY FORMATION: THE MAGNETIZATION OF THE COLD AND WARM MEDIUM. <i>Astrophysical Journal</i> , 2009, 696, 96-109.	4.5	105
67	The Formation of Population III Binaries from Cosmological Initial Conditions. <i>Science</i> , 2009, 325, 601-605.	12.6	301
68	Metal cooling in simulations of cosmic structure formation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2008, 385, 1443-1454.	4.4	107
69	Uncertainties in H ₂ and HD chemistry and cooling and their role in early structure formation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2008, 388, 1627-1651.	4.4	224
70	Galaxy Evolution with Adaptive Mesh Refinement. , 2008, , .		0
71	Black Hole Remnants of the First Stars. , 2008, , .		1
72	How the First Stars Shaped the First Galaxies. , 2008, , .		0

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73	Relativistic Hydrodynamic Flows Using Spatial and Temporal Adaptive Structured Mesh Refinement. <i>Astrophysical Journal, Supplement Series</i> , 2008, 176, 467-483.	7.7	73
74	Resolving the Formation of Protogalaxies. III. Feedback from the First Stars. <i>Astrophysical Journal</i> , 2008, 685, 40-56.	4.5	206
75	How Very Massive Metal-Free Stars Start Cosmological Reionization. <i>Astrophysical Journal</i> , 2008, 684, 1-17.	4.5	70
76	Resolving the Formation of Protogalaxies. II. Central Gravitational Collapse. <i>Astrophysical Journal</i> , 2008, 682, 745-757.	4.5	185
77	Dynamical Expansion of H II Regions from Ultracompact to Compact Sizes in Turbulent, Self-gravitating Molecular Clouds. <i>Astrophysical Journal</i> , 2007, 668, 980-992.	4.5	28
78	Resolving the Formation of Protogalaxies. I. Virialization. <i>Astrophysical Journal</i> , 2007, 665, 899-910.	4.5	138
79	Suppression of H ₂ Cooling in the Ultraviolet Background. <i>Astrophysical Journal</i> , 2007, 671, 1559-1567.	4.5	139
80	The H II Region of a Primordial Star. <i>Astrophysical Journal</i> , 2007, 659, L87-L90.	4.5	138
81	The first generation of stars in the Λ cold dark matter cosmology. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 378, 449-468.	4.4	102
82	Supermassive black hole growth and merger rates from cosmological N-body simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 380, 1533-1540.	4.4	44
83	Quasar H II regions during cosmic reionization. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2007, 380, L30-L34.	3.3	41
84	A New View of the Dwarf Spheroidal Satellites of the Milky Way from VLT FLAMES: Where Are the Very Metal-poor Stars?. <i>Astrophysical Journal</i> , 2006, 651, L121-L124.	4.5	178
85	An Excursion Set Model of the Cosmic Web: The Abundance of Sheets, Filaments, and Halos. <i>Astrophysical Journal</i> , 2006, 645, 783-791.	4.5	75
86	Formation of Primordial Stars in a Λ CDM Universe. <i>Astrophysical Journal</i> , 2006, 652, 6-25.	4.5	384
87	Forming a Primordial Star in a Relic H II Region. <i>Astrophysical Journal</i> , 2005, 628, L5-L8.	4.5	89
88	The Number of Supernovae from Primordial Stars in the Universe. <i>Astrophysical Journal</i> , 2005, 629, 615-624.	4.5	82
89	Forming a primordial star in a relic H II region. <i>Proceedings of the International Astronomical Union</i> , 2005, 1, 169-170.	0.0	0
90	Fragmentation and the formation of primordial protostars: the possible role of collision-induced emission. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 348, 1019-1034.	4.4	84

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91	Cosmic reionization by stellar sources: population III stars. Monthly Notices of the Royal Astronomical Society, 2004, 350, 47-65.	4.4	139
92	Two Distinct Ancient Components in the Sculptor Dwarf Spheroidal Galaxy: First Results from the Dwarf Abundances and Radial Velocities Team. Astrophysical Journal, 2004, 617, L119-L122.	4.5	299
93	Detectability of Long Gamma-Ray Burst Afterglows from Very High Redshifts. Astrophysical Journal, 2004, 604, 508-520.	4.5	75
94	Radiation Hydrodynamic Evolution of Primordial HII Regions. Astrophysical Journal, 2004, 610, 14-22.	4.5	256
95	The angular momentum of gas in protogalaxies – II. The impact of pre-heating. Monthly Notices of the Royal Astronomical Society, 2003, 346, 177-185.	4.4	31
96	Effects of a soft X-ray background on structure formation at high redshift. Monthly Notices of the Royal Astronomical Society, 2003, 338, 273-286.	4.4	111
97	The nature of the ionizing background at $z \approx 2.5$. Monthly Notices of the Royal Astronomical Society, 2003, 340, 473-484.	4.4	25
98	Simulations of Early Structure Formation: Primordial Gas Clouds. Astrophysical Journal, 2003, 592, 645-663.	4.5	441
99	Numerical Simulations of High-Redshift Star Formation in Dwarf Galaxies. Astrophysical Journal, 2003, 587, 13-24.	4.5	41
100	The Influence of Supershells and Galactic Outflows on the Escape of Ionizing Radiation from Dwarf Starburst Galaxies. Astrophysical Journal, 2003, 599, 50-69.	4.5	96
101	Radio Foregrounds for the 21 Centimeter Tomography of the Neutral Intergalactic Medium at High Redshifts. Astrophysical Journal, 2002, 564, 576-580.	4.5	190
102	The Formation of the First Star in the Universe. Science, 2002, 295, 93-98.	12.6	1,138
103	Adaptive ray tracing for radiative transfer around point sources. Monthly Notices of the Royal Astronomical Society, 2002, 330, L53-L56.	4.4	122
104	The epoch of helium reionization. Monthly Notices of the Royal Astronomical Society, 2002, 332, 601-616.	4.4	82
105	Cosmological Hydrogen Reionization with Three-dimensional Radiative Transfer. Astrophysical Journal, 2002, 572, 695-704.	4.5	86
106	The Angular Momentum of Gas in Protogalaxies. I. Implications for the Formation of Disk Galaxies. Astrophysical Journal, 2002, 576, 21-35.	4.5	201
107	Multi-dimensional cosmological radiative transfer with a Variable Eddington Tensor formalism. New Astronomy, 2001, 6, 437-455.	1.8	216
108	Simulating reionization in numerical cosmology. New Astronomy, 2001, 6, 359-379.	1.8	61

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109	Simulations of Pregalactic Structure Formation with Radiative Feedback. <i>Astrophysical Journal</i> , 2001, 548, 509-521.	4.5	311
110	Photon Consumption in Minihalos during Cosmological Reionization. <i>Astrophysical Journal</i> , 2001, 551, 599-607.	4.5	95
111	The Formation and Fragmentation of Primordial Molecular Clouds. <i>Astrophysical Journal</i> , 2000, 540, 39-44.	4.5	460
112	The Radiative Feedback of the First Cosmological Objects. <i>Astrophysical Journal</i> , 2000, 534, 11-24.	4.5	306
113	Intergalactic H ₂ Photodissociation and the Soft Ultraviolet Background Produced by Population III Objects. <i>Astrophysical Journal</i> , 2000, 533, 594-600.	4.5	86
114	Radiative Transfer Effects during Photoheating of the Intergalactic Medium. <i>Astrophysical Journal</i> , 1999, 520, L13-L16.	4.5	132
115	Photon-conserving Radiative Transfer around Point Sources in Multidimensional Numerical Cosmology. <i>Astrophysical Journal</i> , 1999, 523, 66-71.	4.5	132
116	First Structure Formation. I. Primordial Star-forming Regions in Hierarchical Models. <i>Astrophysical Journal</i> , 1998, 508, 518-529.	4.5	136
117	A "Minihalo" Model for the Lyman Limit Absorption Systems at High Redshift. <i>Astrophysical Journal</i> , 1998, 494, L151-L154.	4.5	31
118	How Small Were the First Cosmological Objects?. <i>Astrophysical Journal</i> , 1997, 474, 1-12.	4.5	660
119	Modeling primordial gas in numerical cosmology. <i>New Astronomy</i> , 1997, 2, 181-207.	1.8	469
120	Cosmological hydrodynamics with multi-species chemistry and nonequilibrium ionization and cooling. <i>New Astronomy</i> , 1997, 2, 209-224.	1.8	236