

Benjamin D G Chandran

List of Publications by Year in descending order

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76
papers

3,755
citations

117625

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128289

60
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76
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docs citations

76
times ranked

1791
citing authors

#	ARTICLE	IF	CITATIONS
1	Solar Wind Electrons Alphas and Protons (SWEAP) Investigation: Design of the Solar Wind and Coronal Plasma Instrument Suite for Solar Probe Plus. <i>Space Science Reviews</i> , 2016, 204, 131-186.	8.1	439
2	PERPENDICULAR ION HEATING BY LOW-FREQUENCY ALFVÉN-WAVE TURBULENCE IN THE SOLAR WIND. <i>Astrophysical Journal</i> , 2010, 720, 503-515.	4.5	248
3	INCORPORATING KINETIC PHYSICS INTO A TWO-FLUID SOLAR-WIND MODEL WITH TEMPERATURE ANISOTROPY AND LOW-FREQUENCY ALFVÉN-WAVE TURBULENCE. <i>Astrophysical Journal</i> , 2011, 743, 197.	4.5	167
4	Thermal Conduction in a Tangled Magnetic Field. <i>Physical Review Letters</i> , 1998, 80, 3077-3080.	7.8	158
5	Scattering of Energetic Particles by Anisotropic Magnetohydrodynamic Turbulence with a Goldreich-Sridhar Power Spectrum. <i>Physical Review Letters</i> , 2000, 85, 4656-4659.	7.8	158
6	Sharp Alfvénic Impulses in the Near-Sun Solar Wind. <i>Astrophysical Journal, Supplement Series</i> , 2020, 246, 45.	7.7	115
7	Weak Compressible Magnetohydrodynamic Turbulence in the Solar Corona. <i>Physical Review Letters</i> , 2005, 95, 265004.	7.8	114
8	Strong Anisotropic MHD Turbulence with Cross Helicity. <i>Astrophysical Journal</i> , 2008, 685, 646-658.	4.5	111
9	ALFVÉN WAVE REFLECTION AND TURBULENT HEATING IN THE SOLAR WIND FROM 1 SOLAR RADIUS TO 1 AU: AN ANALYTICAL TREATMENT. <i>Astrophysical Journal</i> , 2009, 707, 1659-1667.	4.5	111
10	DIRECT NUMERICAL SIMULATIONS OF REFLECTION-DRIVEN, REDUCED MAGNETOHYDRODYNAMIC TURBULENCE FROM THE SUN TO THE ALFVÉN CRITICAL POINT. <i>Astrophysical Journal</i> , 2013, 776, 124.	4.5	98
11	CONSTRAINING LOW-FREQUENCY ALFVÉNIC TURBULENCE IN THE SOLAR WIND USING DENSITY-FLUCTUATION MEASUREMENTS. <i>Astrophysical Journal</i> , 2009, 707, 1668-1675.	4.5	88
12	Turbulent Heating of Galaxy Cluster Plasmas. <i>Astrophysical Journal</i> , 2005, 622, 205-216.	4.5	88
13	ALFVÉN-WAVE TURBULENCE AND PERPENDICULAR ION TEMPERATURES IN CORONAL HOLES. <i>Astrophysical Journal</i> , 2010, 720, 548-554.	4.5	76
14	Ion-scale Electromagnetic Waves in the Inner Heliosphere. <i>Astrophysical Journal, Supplement Series</i> , 2020, 246, 66.	7.7	67
15	Disruption of Alfvénic turbulence by magnetic reconnection in a collisionless plasma. <i>Journal of Plasma Physics</i> , 2017, 83, .	2.1	66
16	Hybrid-kinetic Simulations of Ion Heating in Alfvénic Turbulence. <i>Astrophysical Journal</i> , 2019, 879, 53.	4.5	66
17	BUOYANCY INSTABILITIES IN GALAXY CLUSTERS: CONVECTION DUE TO ADIABATIC COSMIC RAYS AND ANISOTROPIC THERMAL CONDUCTION. <i>Astrophysical Journal</i> , 2009, 699, 348-361.	4.5	61
18	Cross Helicity Reversals in Magnetic Switchbacks. <i>Astrophysical Journal, Supplement Series</i> , 2020, 246, 67.	7.7	61

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19	INSTABILITIES DRIVEN BY THE DRIFT AND TEMPERATURE ANISOTROPY OF ALPHA PARTICLES IN THE SOLAR WIND. <i>Astrophysical Journal</i> , 2013, 773, 163.	4.5	59
20	Self-induced Scattering of Strahl Electrons in the Solar Wind. <i>Astrophysical Journal</i> , 2019, 886, 136.	4.5	54
21	Confinement and Isotropization of Galactic Cosmic Rays by Molecular Cloud Magnetic Mirrors When Turbulent Scattering Is Weak. <i>Astrophysical Journal</i> , 2000, 529, 513-535.	4.5	53
22	COLLISIONLESS ISOTROPIZATION OF THE SOLAR-WIND PROTONS BY COMPRESSIVE FLUCTUATIONS AND PLASMA INSTABILITIES. <i>Astrophysical Journal</i> , 2016, 831, 128.	4.5	53
23	OBSERVATIONAL TEST OF STOCHASTIC HEATING IN LOW- β^2 FAST-SOLAR-WIND STREAMS. <i>Astrophysical Journal</i> , 2013, 774, 96.	4.5	51
24	ACCELERATION OF RELATIVISTIC ELECTRONS BY MAGNETOHYDRODYNAMIC TURBULENCE: IMPLICATIONS FOR NON-THERMAL EMISSION FROM BLACK HOLE ACCRETION DISKS. <i>Astrophysical Journal</i> , 2014, 791, 71.	4.5	51
25	LIMITS ON ALPHA PARTICLE TEMPERATURE ANISOTROPY AND DIFFERENTIAL FLOW FROM KINETIC INSTABILITIES: SOLAR WIND OBSERVATIONS. <i>Astrophysical Journal Letters</i> , 2013, 777, L3.	8.3	50
26	Reflection-driven magnetohydrodynamic turbulence in the solar atmosphere and solar wind. <i>Journal of Plasma Physics</i> , 2019, 85, .	2.1	50
27	THE DISPERSION RELATIONS AND INSTABILITY THRESHOLDS OF OBLIQUE PLASMA MODES IN THE PRESENCE OF AN ION BEAM. <i>Astrophysical Journal</i> , 2013, 764, 88.	4.5	48
28	A PARALLEL-PROPAGATING ALFVÉN ION-BEAM INSTABILITY IN THE HIGH-BETA SOLAR WIND. <i>Astrophysical Journal</i> , 2013, 773, 8.	4.5	46
29	Turbulent Generation of Magnetic Switchbacks in the Alfvénic Solar Wind. <i>Astrophysical Journal</i> , 2021, 915, 52.	4.5	43
30	NHDS: The New Hampshire Dispersion Relation Solver. <i>Research Notes of the AAS</i> , 2018, 2, 13.	0.7	41
31	Thermal Conduction and Particle Transport in Strong Magnetohydrodynamic Turbulence, with Application to Galaxy Cluster Plasmas. <i>Astrophysical Journal</i> , 2004, 602, 170-180.	4.5	40
32	Parametric instability, inverse cascade and the range of solar-wind turbulence. <i>Journal of Plasma Physics</i> , 2018, 84, .	2.1	39
33	Weakly Turbulent Magnetohydrodynamic Waves in Compressible Low- β^2 Plasmas. <i>Physical Review Letters</i> , 2008, 101, 235004.	7.8	37
34	Divergence of Neighboring Magnetic-Field Lines and Fast-Particle Diffusion in Strong Magnetohydrodynamic Turbulence, with Application to Thermal Conduction in Galaxy Clusters. <i>Physical Review Letters</i> , 2004, 92, 045001.	7.8	36
35	AGN-driven Convection in Galaxy Cluster Plasmas. <i>Astrophysical Journal</i> , 2005, 632, 809-820.	4.5	34
36	CORONAL FARADAY ROTATION FLUCTUATIONS AND A WAVE/TURBULENCE-DRIVEN MODEL OF THE SOLAR WIND. <i>Astrophysical Journal</i> , 2010, 722, 1495-1503.	4.5	34

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37	RESONANCE BROADENING AND HEATING OF CHARGED PARTICLES IN MAGNETOHYDRODYNAMIC TURBULENCE. <i>Astrophysical Journal</i> , 2012, 758, 78.	4.5	34
38	PERPENDICULAR ION HEATING BY REDUCED MAGNETOHYDRODYNAMIC TURBULENCE. <i>Astrophysical Journal</i> , 2013, 776, 90.	4.5	30
39	THREE-DIMENSIONAL HYBRID SIMULATION STUDY OF ANISOTROPIC TURBULENCE IN THE PROTON KINETIC REGIME. <i>Astrophysical Journal</i> , 2014, 788, 178.	4.5	30
40	Constraining Ion-Scale Heating and Spectral Energy Transfer in Observations of Plasma Turbulence. <i>Physical Review Letters</i> , 2020, 125, 025102.	7.8	29
41	Convection and AGN Feedback in Clusters of Galaxies. <i>Astrophysical Journal</i> , 2007, 671, 1413-1433.	4.5	28
42	PERPENDICULAR PROTON HEATING DUE TO ENERGY CASCADE OF FAST MAGNETOSONIC WAVES IN THE SOLAR CORONA. <i>Astrophysical Journal</i> , 2010, 709, 1003-1008.	4.5	25
43	A MODIFIED VERSION OF TAYLOR'S HYPOTHESIS FOR SOLAR PROBE PLUS OBSERVATIONS. <i>Astrophysical Journal Letters</i> , 2015, 801, L18.	8.3	25
44	Stochastic proton heating by kinetic-Alfvén-wave turbulence in moderately high- β plasmas. <i>Journal of Plasma Physics</i> , 2018, 84, .	2.1	25
45	THE TURBULENT HEATING RATE IN STRONG MAGNETOHYDRODYNAMIC TURBULENCE WITH NONZERO CROSS HELICITY. <i>Astrophysical Journal</i> , 2009, 701, 652-657.	4.5	24
46	RESONANT INTERACTIONS BETWEEN PROTONS AND OBLIQUE ALFVÉN/ION-CYCLOTRON WAVES IN THE SOLAR CORONA AND SOLAR FLARES. <i>Astrophysical Journal</i> , 2010, 722, 710-720.	4.5	24
47	DECELERATION OF ALPHA PARTICLES IN THE SOLAR WIND BY INSTABILITIES AND THE ROTATIONAL FORCE: IMPLICATIONS FOR HEATING, AZIMUTHAL FLOW, AND THE PARKER SPIRAL MAGNETIC FIELD. <i>Astrophysical Journal</i> , 2015, 806, 157.	4.5	24
48	Evolution of Large-amplitude Alfvén Waves and Generation of Switchbacks in the Expanding Solar Wind. <i>Astrophysical Journal</i> , 2021, 918, 62.	4.5	24
49	EVOLUTION OF THE PROTON VELOCITY DISTRIBUTION DUE TO STOCHASTIC HEATING IN THE NEAR-SUN SOLAR WIND. <i>Astrophysical Journal</i> , 2016, 820, 47.	4.5	23
50	The Enhancement of Proton Stochastic Heating in the Near-Sun Solar Wind. <i>Astrophysical Journal, Supplement Series</i> , 2020, 246, 30.	7.7	23
51	Multiscale Solar Wind Turbulence Properties inside and near Switchbacks Measured by the Parker Solar Probe. <i>Astrophysical Journal</i> , 2021, 912, 28.	4.5	23
52	Heat Transport Along an Inhomogeneous Magnetic Field. I. Periodic Magnetic Mirrors. <i>Astrophysical Journal</i> , 1999, 525, 638-650.	4.5	23
53	Particle Acceleration by Slow Modes in Strong Compressible Magnetohydrodynamic Turbulence, with Application to Solar Flares. <i>Astrophysical Journal</i> , 2003, 599, 1426-1433.	4.5	22
54	THE EFFICIENCY OF SECOND-ORDER FERMI ACCELERATION BY WEAKLY COMPRESSIBLE MAGNETOHYDRODYNAMIC TURBULENCE. <i>Astrophysical Journal</i> , 2013, 777, 128.	4.5	21

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55	Acceleration of Energetic Particles by Large-scale Compressible Magnetohydrodynamic Turbulence. <i>Astrophysical Journal</i> , 2004, 603, 23-27.	4.5	20
56	Interplay between intermittency and dissipation in collisionless plasma turbulence. <i>Journal of Plasma Physics</i> , 2019, 85, .	2.1	19
57	Convection in Galaxy-cluster Plasmas Driven by Active Galactic Nuclei and Cosmic-Ray Buoyancy. <i>Astrophysical Journal</i> , 2004, 616, 169-177.	4.5	16
58	Heating of accretion-disk coronae and jets by general relativistic magnetohydrodynamic turbulence. <i>Journal of Plasma Physics</i> , 2018, 84, .	2.1	12
59	The Effects of Velocity Correlation Times on the Turbulent Amplification of Magnetic Energy. <i>Astrophysical Journal</i> , 1997, 482, 156-166.	4.5	11
60	VELOCITY-SHEAR-INDUCED MODE COUPLING IN THE SOLAR ATMOSPHERE AND SOLAR WIND: IMPLICATIONS FOR PLASMA HEATING AND MHD TURBULENCE. <i>Astrophysical Journal</i> , 2013, 769, 142.	4.5	11
61	Mirror and Proton-cyclotron Instabilities Coexisting with Ambient Turbulence in a Proton-Alpha Plasma. <i>Astrophysical Journal</i> , 2020, 889, 7.	4.5	11
62	An approximate analytic solution to the coupled problems of coronal heating and solar-wind acceleration. <i>Journal of Plasma Physics</i> , 2021, 87, .	2.1	11
63	Proton Temperature-anisotropy Instability Coexisting with Ambient Turbulence in the Solar-wind Plasma. <i>Astrophysical Journal</i> , 2019, 875, 125.	4.5	10
64	Ion Heating Resulting from the Deceleration of Alpha Particles by a Proton-alpha Drift Instability in a Nonuniform Solar-wind Plasma. <i>Astrophysical Journal</i> , 2019, 870, 121.	4.5	10
65	A Comparison between Markovian and Non-Markovian Closures in Simulations of Nonlinear Dynamos with Application to the Protogalactic Dynamo. <i>Astrophysical Journal</i> , 1997, 485, 148-158.	4.5	8
66	PARKER/BUOYANCY INSTABILITIES WITH ANISOTROPIC THERMAL CONDUCTION, COSMIC RAYS, AND ARBITRARY MAGNETIC FIELD STRENGTH. <i>Astrophysical Journal</i> , 2009, 690, 566-579.	4.5	7
67	Two-dimensional Nonlinear Simulations of Temperature-anisotropy Instabilities with a Proton-alpha Drift. <i>Astrophysical Journal</i> , 2018, 856, 153.	4.5	7
68	MAGNETOHYDRODYNAMIC SLOW MODE WITH DRIFTING He^{++} : IMPLICATIONS FOR CORONAL SEISMOLOGY AND THE SOLAR WIND. <i>Astrophysical Journal</i> , 2014, 788, 35.	4.5	6
69	ON THE CONSERVATION OF CROSS HELICITY AND WAVE ACTION IN SOLAR-WIND MODELS WITH NON-WKB ALFVÉN WAVE REFLECTION. <i>Astrophysical Journal</i> , 2015, 811, 50.	4.5	6
70	Viscous Relaxation and the Transition between the Kinematic and Nonlinear Galactic Dynamos. <i>Astrophysical Journal</i> , 1998, 492, 179-189.	4.5	6
71	How Alfvén waves energize the solar wind: heat versus work. <i>Journal of Plasma Physics</i> , 2021, 87, .	2.1	5
72	STOCHASTIC ACCELERATION OF ELECTRONS BY FAST MAGNETOSONIC WAVES IN SOLAR FLARES: THE EFFECTS OF ANISOTROPY IN VELOCITY AND WAVENUMBER SPACE. <i>Astrophysical Journal</i> , 2014, 796, 45.	4.5	4

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73	Features of Magnetic Field Switchbacks in Relation to the Local-field Geometry of Large-amplitude Alfvénic Oscillations: Wind and PSP Observations. <i>Astrophysical Journal Letters</i> , 2022, 932, L13.	8.3	4
74	The Growth of Cross Helicity in the Protogalactic Dynamo. <i>Astrophysical Journal</i> , 1997, 490, 156-165.	4.5	2
75	THE EFFECTS OF WAVE ESCAPE ON FAST MAGNETOSONIC WAVE TURBULENCE IN SOLAR FLARES. <i>Astrophysical Journal</i> , 2012, 757, 72.	4.5	1
76	The Importance of Anisotropic Interstellar Turbulence and Molecular-Cloud Magnetic Mirrors for Galactic Cosmic-Ray Propagation. <i>Space Sciences Series of ISSI</i> , 2001, , 271-280.	0.0	0