

Benjamin Chandran

List of Publications by Year in descending order

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70
papers

4,855
citations

94433

37
h-index

91884

69
g-index

70
all docs

70
docs citations

70
times ranked

1708
citing authors

#	ARTICLE	IF	CITATIONS
1	Strong Perpendicular Velocity-space Diffusion in Proton Beams Observed by Parker Solar Probe. <i>Astrophysical Journal</i> , 2022, 924, 112.	4.5	16
2	Improving the Alfvén Wave Solar Atmosphere Model Based on Parker Solar Probe Data. <i>Astrophysical Journal</i> , 2022, 925, 146.	4.5	16
3	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
4	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
5	How Alfvén waves energize the solar wind: heat versus work. <i>Journal of Plasma Physics</i> , 2021, 87, .	2.1	5
6	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
7	The near-Sun streamer belt solar wind: turbulence and solar wind acceleration. <i>Astronomy and Astrophysics</i> , 2021, 650, L3.	5.1	26
8	Electron heat flux in the near-Sun environment. <i>Astronomy and Astrophysics</i> , 2021, 650, A15.	5.1	32
9	Turbulent Generation of Magnetic Switchbacks in the Alfvénic Solar Wind. <i>Astrophysical Journal</i> , 2021, 915, 52.	4.5	43
10	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
11	A Solar Source of Alfvénic Magnetic Field Switchbacks: In Situ Remnants of Magnetic Funnel on Supergranulation Scales. <i>Astrophysical Journal</i> , 2021, 923, 174.	4.5	67
12	Exact nonlinear solutions for three-dimensional Alfvén-wave packets in relativistic magnetohydrodynamics. <i>Journal of Plasma Physics</i> , 2021, 87, .	2.1	3
13	In-situ Switchback Formation in the Expanding Solar Wind. <i>Astrophysical Journal Letters</i> , 2020, 891, L2.	8.3	110
14	Constraining Ion-Scale Heating and Spectral Energy Transfer in Observations of Plasma Turbulence. <i>Physical Review Letters</i> , 2020, 125, 025102.	7.8	29
15	The Evolution and Role of Solar Wind Turbulence in the Inner Heliosphere. <i>Astrophysical Journal, Supplement Series</i> , 2020, 246, 53.	7.7	166
16	Ion-scale Electromagnetic Waves in the Inner Heliosphere. <i>Astrophysical Journal, Supplement Series</i> , 2020, 246, 66.	7.7	67
17	Cross Helicity Reversals in Magnetic Switchbacks. <i>Astrophysical Journal, Supplement Series</i> , 2020, 246, 67.	7.7	61
18	Mirror and Proton-cyclotron Instabilities Coexisting with Ambient Turbulence in a Proton-Alpha Plasma. <i>Astrophysical Journal</i> , 2020, 889, 7.	4.5	11

#	ARTICLE	IF	CITATIONS
19	The Enhancement of Proton Stochastic Heating in the Near-Sun Solar Wind. <i>Astrophysical Journal, Supplement Series</i> , 2020, 246, 30.	7.7	23
20	Sharp Alfvénic Impulses in the Near-Sun Solar Wind. <i>Astrophysical Journal, Supplement Series</i> , 2020, 246, 45.	7.7	115
21	Hybrid-kinetic Simulations of Ion Heating in Alfvénic Turbulence. <i>Astrophysical Journal</i> , 2019, 879, 53.	4.5	66
22	Interplay between intermittency and dissipation in collisionless plasma turbulence. <i>Journal of Plasma Physics</i> , 2019, 85, .	2.1	19
23	Reflection-driven magnetohydrodynamic turbulence in the solar atmosphere and solar wind. <i>Journal of Plasma Physics</i> , 2019, 85, .	2.1	50
24	Proton Temperature-anisotropy Instability Coexisting with Ambient Turbulence in the Solar-wind Plasma. <i>Astrophysical Journal</i> , 2019, 875, 125.	4.5	10
25	Self-induced Scattering of Strahl Electrons in the Solar Wind. <i>Astrophysical Journal</i> , 2019, 886, 136.	4.5	54
26	Alfvénic velocity spikes and rotational flows in the near-Sun solar wind. <i>Nature</i> , 2019, 576, 228-231.	27.8	311
27	Highly structured slow solar wind emerging from an equatorial coronal hole. <i>Nature</i> , 2019, 576, 237-242.	27.8	401
28	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
29	Two-dimensional Nonlinear Simulations of Temperature-anisotropy Instabilities with a Proton-alpha Drift. <i>Astrophysical Journal</i> , 2018, 856, 153.	4.5	7
30	Parametric instability, inverse cascade and the k range of solar-wind turbulence. <i>Journal of Plasma Physics</i> , 2018, 84, .	2.1	39
31	Stochastic proton heating by kinetic-Alfvén-wave turbulence in moderately high- plasmas. <i>Journal of Plasma Physics</i> , 2018, 84, .	2.1	25
32	ALPS: the Arbitrary Linear Plasma Solver. <i>Journal of Plasma Physics</i> , 2018, 84, .	2.1	19
33	Heating of accretion-disk coronae and jets by general relativistic magnetohydrodynamic turbulence. <i>Journal of Plasma Physics</i> , 2018, 84, .	2.1	12
34	NHDS: The New Hampshire Dispersion Relation Solver. <i>Research Notes of the AAS</i> , 2018, 2, 13.	0.7	41
35	Disruption of Alfvénic turbulence by magnetic reconnection in a collisionless plasma. <i>Journal of Plasma Physics</i> , 2017, 83, .	2.1	66
36	Disruption of sheet-like structures in Alfvénic turbulence by magnetic reconnection. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 468, 4862-4871.	4.4	83

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37	COLLISIONLESS ISOTROPIZATION OF THE SOLAR-WIND PROTONS BY COMPRESSIVE FLUCTUATIONS AND PLASMA INSTABILITIES. <i>Astrophysical Journal</i> , 2016, 831, 128.	4.5	53
38	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
39	The FIELDS Instrument Suite for Solar Probe Plus. <i>Space Science Reviews</i> , 2016, 204, 49-82.	8.1	521
40	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
41	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
42	Refined critical balance in strong Alfvénic turbulence. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2015, 449, L77-L81.	3.3	52
43	INTERMITTENCY AND ALIGNMENT IN STRONG RMHD TURBULENCE. <i>Astrophysical Journal</i> , 2015, 807, 39.	4.5	80
44	A MODIFIED VERSION OF TAYLOR'S HYPOTHESIS FOR SOLAR PROBE PLUS OBSERVATIONS. <i>Astrophysical Journal Letters</i> , 2015, 801, L18.	8.3	25
45	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
46	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
47	THREE-DIMENSIONAL HYBRID SIMULATION STUDY OF ANISOTROPIC TURBULENCE IN THE PROTON KINETIC REGIME. <i>Astrophysical Journal</i> , 2014, 788, 178.	4.5	30
48	PERPENDICULAR ION HEATING BY REDUCED MAGNETOHYDRODYNAMIC TURBULENCE. <i>Astrophysical Journal</i> , 2013, 776, 90.	4.5	30
49	STOCHASTIC HEATING, DIFFERENTIAL FLOW, AND THE ALPHA-TO-PROTON TEMPERATURE RATIO IN THE SOLAR WIND. <i>Astrophysical Journal</i> , 2013, 776, 45.	4.5	50
50	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
51	A PARALLEL-PROPAGATING ALFVÉN ION-BEAM INSTABILITY IN THE HIGH-BETA SOLAR WIND. <i>Astrophysical Journal</i> , 2013, 773, 8.	4.5	46
52	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
53	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
54	OBSERVATIONAL TEST OF STOCHASTIC HEATING IN LOW- β^2 FAST-SOLAR-WIND STREAMS. <i>Astrophysical Journal</i> , 2013, 774, 96.	4.5	51

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55	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
56	RESONANCE BROADENING AND HEATING OF CHARGED PARTICLES IN MAGNETOHYDRODYNAMIC TURBULENCE. <i>Astrophysical Journal</i> , 2012, 758, 78.	4.5	34
57	THE EFFECTS OF WAVE ESCAPE ON FAST MAGNETOSONIC WAVE TURBULENCE IN SOLAR FLARES. <i>Astrophysical Journal</i> , 2012, 757, 72.	4.5	1
58	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
59	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
60	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
61	ALFVÉN-WAVE TURBULENCE AND PERPENDICULAR ION TEMPERATURES IN CORONAL HOLES. <i>Astrophysical Journal</i> , 2010, 720, 548-554.	4.5	76
62	PERPENDICULAR ION HEATING BY LOW-FREQUENCY ALFVÉN-WAVE TURBULENCE IN THE SOLAR WIND. <i>Astrophysical Journal</i> , 2010, 720, 503-515.	4.5	248
63	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
64	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
65	Scale-dependent angle of alignment between velocity and magnetic field fluctuations in solar wind turbulence. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	44
66	CONSTRAINING LOW-FREQUENCY ALFVÉNIC TURBULENCE IN THE SOLAR WIND USING DENSITY-FLUCTUATION MEASUREMENTS. <i>Astrophysical Journal</i> , 2009, 707, 1668-1675.	4.5	88
67	Scale dependent alignment between velocity and magnetic field fluctuations in the solar wind and comparisons to Boldyrev's phenomenological theory. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	5
68	Weakly Turbulent Magnetohydrodynamic Waves in Compressible Low- β Plasmas. <i>Physical Review Letters</i> , 2008, 101, 235004.	7.8	37
69	Strong Anisotropic MHD Turbulence with Cross Helicity. <i>Astrophysical Journal</i> , 2008, 685, 646-658.	4.5	111
70	Weak Compressible Magnetohydrodynamic Turbulence in the Solar Corona. <i>Physical Review Letters</i> , 2005, 95, 265004.	7.8	114