James A Klimchuk

List of Publications by Year
in descending order

143 papers	8,204 citations	47006 47 h-index	48315 88 g-index
147 all docs	147 docs citations	147 times ranked	2051 citing authors

#	Article	IF	Citations
1	Flows in Enthalpy-based Thermal Evolution of Loops. Astrophysical Journal, 2022, 924, 13.	4.5	1
2	Impact of 3D Structure on Magnetic Reconnection. Astrophysical Journal, 2022, 927, 196.	4.5	3
3	The Coronal Veil. Astrophysical Journal, 2022, 927, 1.	4.5	19
4	High Resolution Soft X-ray Spectroscopy and the Quest for the Hot (5â€“10 MK) Plasma in Solar Active Regions. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	13
5	How Turbulent is the Magnetically Closed Corona?. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	7
6	Nonthermal Velocity in the Transition Region of Active Regions and Its Center-to-limb Variation. Astrophysical Journal, 2021, 913, 151.	4.5	3
7	Static and dynamic solar coronal loops with cross-sectional area variations. Monthly Notices of the Royal Astronomical Society, 2021, 509, 4420-4429.	4.4	9
8	Signatures of Type III Solar Radio Bursts from Nanoflares: Modeling. Astrophysical Journal, 2021, 922, 128.	4.5	2
9	The Onset of 3D Magnetic Reconnection and Heating in the Solar Corona. Astrophysical Journal, 2020, 891, 62.	4.5	18
10	Cross Sections of Coronal Loop Flux Tubes. Astrophysical Journal, 2020, 900, 167.	4.5	25
11	Transition Region Contribution to AIA Observations in the Context of Coronal Heating. Astrophysical Journal, 2020, 905, 115.	4.5	5
12	Achievements of Hinode in the first eleven years. Publication of the Astronomical Society of Japan, 2019, 71, .	2.5	69
13	Spectroscopic Constraints on the Cross-sectional Asymmetry and Expansion of Active Region Loops. Astrophysical Journal, 2019, 885, 7.	4.5	11
14	The Role of Asymmetries in Thermal Nonequilibrium. Astrophysical Journal, 2019, 884, 68.	4.5	32
15	On Doppler Shift and Its Center-to-limb Variation in Active Regions in the Transition Region. Astrophysical Journal, 2019, 886, 46.	4.5	7
16	The Role of Magnetic Helicity in Coronal Heating. Astrophysical Journal, 2019, 883, 26.	4.5	19
17	The Distinction Between Thermal Nonequilibrium and Thermal Instability. Solar Physics, 2019, 294, 1.	2.5	26
18	Magnetic Braids in Eruptions of a Spiral Structure in the Solar Atmosphere. Astrophysical Journal, 2018, 854, 80.	4.5	23

#	Article	IF	Citations
19	Dressing the Coronal Magnetic Extrapolations of Active Regions with a Parameterized Thermal Structure. Astrophysical Journal, 2018, 853, 66.	4.5	26
20	Power-law Statistics of Driven Reconnection in the Magnetically Closed Corona. Astrophysical Journal, 2018, 853, 82.	4.5	27
21	Hard X-Ray Constraints on Small-scale Coronal Heating Events. Astrophysical Journal, 2018, 864, 5.	4.5	15
22	UNRAVELLING THE COMPONENTS OF A MULTI-THERMAL CORONAL LOOP USING MAGNETOHYDRODYNAMIC SEISMOLOGY. Astrophysical Journal, 2017, 834, 103.	4.5	13
23	A Survey of Nanoflare Properties in Active Regions Observed with the Solar Dynamics Observatory. Astrophysical Journal, 2017, 842, 108.	4.5	29
24	A NANOFLARE-BASED CELLULAR AUTOMATON MODEL AND THE OBSERVED PROPERTIES OF THE CORONAL PLASMA. Astrophysical Journal, 2016, 828, 86.	4.5	11
25	SIGNATURES OF STEADY HEATING IN TIME LAG ANALYSIS OF CORONAL EMISSION. Astrophysical Journal, 2016, 828, 76.	4.5	19
26	Intensity Conserving Spectral Fitting. Solar Physics, 2016, 291, 55-65.	2.5	10
27	CHROMOSPHERIC NANOFLARES AS A SOURCE OF CORONAL PLASMA. II. REPEATING NANOFLARES. Astrophysical Journal, 2015, 811, 129.	4.5	21
28	HOW GAS-DYNAMIC FLARE MODELS POWERED BY PETSCHEK RECONNECTION DIFFER FROM THOSE WITH AD HOC ENERGY SOURCES. Astrophysical Journal, 2015, 813, 131.	4.5	18
29	THE TRANSITION REGION RESPONSE TO A CORONAL NANOFLARE: FORWARD MODELING AND OBSERVATIONS INSDO/AIA. Astrophysical Journal, 2015, 799, 58.	4.5	26
30	TWO-DIMENSIONAL CELLULAR AUTOMATON MODEL FOR THE EVOLUTION OF ACTIVE REGION CORONAL PLASMAS. Astrophysical Journal, 2015, 799, 128.	4.5	19
31	Key aspects of coronal heating. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140256.	3.4	168
32	EMISSION MEASURE DISTRIBUTION FOR DIFFUSE REGIONS IN SOLAR ACTIVE REGIONS. Astrophysical Journal, 2014, 795, 76.	4.5	15
33	CORE AND WING DENSITIES OF ASYMMETRIC CORONAL SPECTRAL PROFILES: IMPLICATIONS FOR THE MASS SUPPLY OF THE SOLAR CORONA. Astrophysical Journal, 2014, 781, 58.	4.5	17
34	ARE CHROMOSPHERIC NANOFLARES A PRIMARY SOURCE OF CORONAL PLASMA?. Astrophysical Journal, 2014, 791, 60.	4.5	37
35	MHD modeling of coronal loops: the transition region throat. Astronomy and Astrophysics, 2014, 564, A48.	5.1	18
36	MHD modelling of coronal loops: injection of high-speed chromospheric flows. Astronomy and Astrophysics, 2014, 567, A70.	5.1	12

#	Article	IF	Citations
37	MODELING THE LINE-OF-SIGHT INTEGRATED EMISSION IN THE CORONA: IMPLICATIONS FOR CORONAL HEATING. Astrophysical Journal, 2013, 771, 115.	4.5	54
38	CAN THE DIFFERENTIAL EMISSION MEASURE CONSTRAIN THE TIMESCALE OF ENERGY DEPOSITION IN THE CORONA?. Astrophysical Journal, 2013, 774, 31.	4.5	42
39	DIAGNOSING THE TIME DEPENDENCE OF ACTIVE REGION CORE HEATING FROM THE EMISSION MEASURE. II. NANOFLARE TRAINS. Astrophysical Journal, 2013, 764, 193.	4.5	40
40	ULTRAVIOLET AND EXTREME-ULTRAVIOLET EMISSIONS AT THE FLARE FOOTPOINTS OBSERVED BY ATMOSPHERE IMAGING ASSEMBLY. Astrophysical Journal, 2013, 774, 14.	4.5	20
41	ASYMMETRIES IN CORONAL SPECTRAL LINES AND EMISSION MEASURE DISTRIBUTION. Astrophysical Journal, 2013, 779, 1.	4.5	29
42	Structure of solar coronal loops: from miniature to large-scale. Astronomy and Astrophysics, 2013, 556, A104.	5.1	102
43	The role of type II spicules in the upper solar atmosphere. Journal of Geophysical Research, 2012, 117, .	3.3	62
44	ENTHALPY-BASED THERMAL EVOLUTION OF LOOPS. III. COMPARISON OF ZERO-DIMENSIONAL MODELS. Astrophysical Journal, 2012, 758, 5.	4.5	58
45	ENTHALPY-BASED THERMAL EVOLUTION OF LOOPS. II. IMPROVEMENTS TO THE MODEL. Astrophysical Journal, 2012, 752, 161.	4.5	93
46	ACTIVE REGION MOSS: DOPPLER SHIFTS FROMHINODE/EXTREME-ULTRAVIOLET IMAGING SPECTROMETER OBSERVATIONS. Astrophysical Journal, 2012, 753, 37.	4.5	22
47	DIAGNOSING THE TIME-DEPENDENCE OF ACTIVE REGION CORE HEATING FROM THE EMISSION MEASURE. I. LOW-FREQUENCY NANOFLARES. Astrophysical Journal, 2012, 758, 53.	4.5	65
48	EVIDENCE FOR WIDESPREAD COOLING IN AN ACTIVE REGION OBSERVED WITH THESDOATMOSPHERIC IMAGING ASSEMBLY. Astrophysical Journal, 2012, 753, 35.	4.5	110
49	EMISSION MEASURE DISTRIBUTION AND HEATING OF TWO ACTIVE REGION CORES. Astrophysical Journal, 2011, 740, 111.	4.5	68
50	COMMISSION 10: SOLAR ACTIVITY. Proceedings of the International Astronomical Union, 2011, 7, 69-80.	0.0	3
51	A cellular automaton model for coronal heating. Proceedings of the International Astronomical Union, 2011, 7, 433-436.	0.0	0
52	DIVISION II: SUN and HELIOSPHERE. Proceedings of the International Astronomical Union, 2011, 7, 61-68.	0.0	0
53	WIDESPREAD NANOFLARE VARIABILITY DETECTED WITHHINODE/X-RAY TELESCOPE IN A SOLAR ACTIVE REGION. Astrophysical Journal, 2011, 736, 111.	4.5	39
54	PATTERNS OF NANOFLARE STORM HEATING EXHIBITED BY AN ACTIVE REGION OBSERVED WITHSOLAR DYNAMICS OBSERVATORY/ATMOSPHERIC IMAGING ASSEMBLY. Astrophysical Journal, 2011, 738, 24.	4.5	98

#	Article	IF	Citations
55	NEW SOLAR EXTREME-ULTRAVIOLET IRRADIANCE OBSERVATIONS DURING FLARES. Astrophysical Journal, 2011, 739, 59.	4.5	144
56	WHAT DOMINATES THE CORONAL EMISSION SPECTRUM DURING THE CYCLE OF IMPULSIVE HEATING AND COOLING?. Astrophysical Journal, Supplement Series, 2011, 194, 26.	7.7	87
57	DIVISION II: SUN and HELIOSPHERE. Proceedings of the International Astronomical Union, 2010, 6, 146-157.	0.0	0
58	ON THE ISOTHERMALITY OF SOLAR PLASMAS. Astrophysical Journal, 2010, 723, 320-328.	4.5	21
59	EVIDENCE OF IMPULSIVE HEATING IN ACTIVE REGION CORE LOOPS. Astrophysical Journal, 2010, 723, 713-718.	4.5	33
60	CAN THERMAL NONEQUILIBRIUM EXPLAIN CORONAL LOOPS?. Astrophysical Journal, 2010, 714, 1239-1248.	4.5	76
61	A SIMPLE MODEL FOR THE EVOLUTION OF MULTI-STRANDED CORONAL LOOPS. Astrophysical Journal, 2010, 719, 591-601.	4.5	25
62	SPECTROSCOPIC OBSERVATIONS OF HOT LINES CONSTRAINING CORONAL HEATING IN SOLAR ACTIVE REGIONS. Astrophysical Journal, 2009, 696, 760-765.	4.5	37
63	Multi-wavelength observations and modelling of a canonical solar flare. Astronomy and Astrophysics, 2009, 494, 1127-1136.	5.1	55
64	HINODE X-RAY TELESCOPE DETECTION OF HOT EMISSION FROM QUIESCENT ACTIVE REGIONS: A NANOFLARE SIGNATURE?. Astrophysical Journal, 2009, 693, L131-L135.	4.5	85
65	EXPLOSIVE INSTABILITY AND CORONAL HEATING. Astrophysical Journal, 2009, 704, 1059-1064.	4.5	23
66	EVIDENCE OF WIDESPREAD HOT PLASMA IN A NONFLARING CORONAL ACTIVE REGION FROMHINODE/X-RAY TELESCOPE. Astrophysical Journal, 2009, 698, 756-765.	4.5	84
67	Highly Efficient Modeling of Dynamic Coronal Loops. Astrophysical Journal, 2008, 682, 1351-1362.	4.5	246
68	Static and Impulsive Models of Solar Active Regions. Astrophysical Journal, 2008, 689, 1406-1411.	4.5	22
69	DIVISION II: SUN AND HELIOSPHERE. Proceedings of the International Astronomical Union, 2008, 4, 73-78.	0.0	0
70	COMMISSION 10: SOLAR ACTIVITY. Proceedings of the International Astronomical Union, 2008, 4, 79-103.	0.0	5
71	Are Constant Loop Widths an Artifact of the Background and the Spatial Resolution?. Astrophysical Journal, 2008, 673, 586-597.	4.5	29
72	The Temporal Evolution of Coronal Loops Observed byGOESSXI. Astrophysical Journal, 2007, 657, 1127-1136.	4.5	27

#	Article	IF	Citations
73	The Crossâ€Field Thermal Structure of Coronal Loops from Tripleâ€FilterTRACEObservations. Astrophysical Journal, 2007, 667, 591-601.	4.5	17
74	DIVISION II: SUN AND HELIOSPHERE. Proceedings of the International Astronomical Union, 2007, 3, 101-106.	0.0	0
75	The Origin of Highâ€Speed Motions and Threads in Prominences. Astrophysical Journal, 2006, 637, 531-540.	4.5	91
76	The Magnetic Structure of Coronal Loops Observed byTRACE. Astrophysical Journal, 2006, 639, 459-474.	4.5	74
77	On the Temperatureâ€“Emission Measure Distribution in Stellar Coronae. Astrophysical Journal, 2006, 643, 438-443.	4.5	14
78	DC coronal heating and the nonlinear evolution of current sheets. Advances in Space Research, 2006, 37, 1342-1347.	2.6	4
79	On Solving the Coronal Heating Problem. Solar Physics, 2006, 234, 41-77.	2.5	639
80	Nonthermal Spectral Line Broadening and the Nanoflare Model. Astrophysical Journal, 2006, 647, 1452-1465.	4.5	115
81	Coronal Heating. AIP Conference Proceedings, 2006, , .	0.4	3
82	Coronal Loop Heating by Nanoflares: The Impact of the Fieldâ€aligned Distribution of the Heating on Loop Observations. Astrophysical Journal, 2005, 628, 1023-1030.	4.5	43
83	An Explanation for the â€œSwitchâ€Onâ€•Nature of Magnetic Energy Release and Its Application to Coronal Heating. Astrophysical Journal, 2005, 622, 1191-1201.	4.5	79
84	Division II: Sun and Heliosphere. Proceedings of the International Astronomical Union, 2005, 1, 69-74.	0.0	0
85	Commission 10: Solar Activity. Proceedings of the International Astronomical Union, 2005, 1, 75-88.	0.0	0
86	An Observational Test for Coronal Heating Models. Symposium - International Astronomical Union, 2004, 219, 473-477.	0.1	0
87	Comments on `Possible Role of MHD Waves in Heating the Solar Corona' by Dwivedi and Pandey. Solar Physics, 2004, 221, 47-49.	2.5	2
88	Coronal Seismology and the Propagation of Acoustic Waves along Coronal Loops. Astrophysical Journal, 2004, 616, 1232-1241.	4.5	40
89	The Inability of Steadyâ€Flow Models to Explain the Extremeâ€Ultraviolet Coronal Loops. Astrophysical Journal, 2004, 603, 322-329.	4.5	43
90	Nanoflare Heating of the Corona Revisited. Astrophysical Journal, 2004, 605, 911-920.	4.5	157

#	Article	IF	Citations
91	A Model for Bright Extremeâ€Ultraviolet Knots in Solar Flare Loops. Astrophysical Journal, 2004, 614, 1022-1027.	4.5	17
92	Coronal energy release via ideal three-dimensional instability three-dimensional instability. Advances in Space Research, 2003, 32, 1029-1034.	2.6	13
93	Constraints on the Magnetic Field Geometry in Prominences. Astrophysical Journal, 2003, 593, 1187-1194.	4.5	54
94	The Longâ€Term Evolution of AR 7978: The Scalings of the Coronal Plasma Parameters with the Mean Photospheric Magnetic Field. Astrophysical Journal, 2003, 586, 579-591.	4.5	44
95	The Longâ€Term Evolution of AR 7978: Testing Coronal Heating Models. Astrophysical Journal, 2003, 586, 592-605.	4.5	35
96	A Transient Heating Model for Coronal Structure and Dynamics. Astrophysical Journal, 2003, 582, 486-494.	4.5	59
97	Are Magnetic Dips Necessary for Prominence Formation?. Astrophysical Journal, 2001, 553, L85-L88.	4.5	161
98	Cross-Sectional Properties of Coronal Loops. , 2001, , 53-75.		13
99	Width Variations along Coronal Loops Observed by Trace. , 2001, , 77-92.		5
100	Properties of EUV and X-ray emission in solar active regions. Astronomy and Astrophysics, 2001, 365, 186-197.	5.1	3
101	Spectroscopic Diagnostics of Nanoflareâ€heated Loops. Astrophysical Journal, 2001, 553, 440-448.	4.5	86
102	On the Correlation between Coronal and Lower Transition Region Structures at Arcsecond Scales. Astrophysical Journal, 2001, 563, 374-380.	4.5	33
103	Twisted Coronal Magnetic Loops. Astrophysical Journal, 2000, 542, 504-512.	4.5	52
104	Magnetic Field and Plasma Scaling Laws: Their Implications for Coronal Heating Models. Astrophysical Journal, 2000, 530, 999-1015.	4.5	187
105	Threeâ€dimensional Stereoscopic Analysis of Solar Active Region Loops. II.SOHO/EIT Observations at Temperatures of 1.5â€“2.5 MK. Astrophysical Journal, 2000, 531, 1129-1149.	4.5	98
106	A Model for Solar Coronal Mass Ejections. Astrophysical Journal, 1999, 510, 485-493.	4.5	1,180
107	The Dynamic Formation of Prominence Condensations. Astrophysical Journal, 1999, 512, 985-991.	4.5	185
108	Threeâ€dimensional Stereoscopic Analysis of Solar Active Region Loops. I.SOHO/EIT Observations at Temperatures of (1.0â€“1.5) x 106K. Astrophysical Journal, 1999, 515, 842-867.	4.5	252

#	Article	IF	Citations
109	‹title›Report on new mission concept study: Stereo X-Ray Corona Imager mission‹/title›. , 1998, , .		4
110	A Selfâ€consistent Model for the Resonant Heating of Coronal Loops: The Effects of Coupling with the Chromosphere. Astrophysical Journal, 1998, 493, 474-479.	4.5	95
111	Prominence Formation by Localized Heating. Astrophysical Journal, 1998, 495, 485-490.	4.5	42
112	The Occurrence Rate of Soft Xâ€Ray Flares as a Function of Solar Activity. Astrophysical Journal, 1997, 474, 511-517.	4.5	49
113	Magnetic energy release on the Sun. Nature, 1997, 386, 760-761.	27.8	3
114	A Nanoflare Explanation for the Heating of Coronal Loops Observed byYohkoh. Astrophysical Journal, 1997, 478, 799-806.	4.5	143
115	‹title›STEREO: a solar terrestrial event observer mission concept‹/title›. , 1996, , .		4
116	The Heating of Soft X-Ray Coronal Loops. , 1996, , 39-40.		0
117	Scaling of heating rates in solar coronal loops. Nature, 1995, 377, 131-133.	27.8	59
118	A Comparison of Active Region Temperatures and Emission Measures Observed in Soft X-Rays and Microwaves and Implications for Coronal Heating. Astrophysical Journal, 1995, 448, 925.	4.5	53
119	Soft X-Ray Loops and Coronal Heating. Astrophysical Journal, 1995, 454, 499.	4.5	146
120	Solar Rotation Stereoscopy in Microwaves. Astrophysical Journal, 1995, 454, 512.	4.5	41
121	Asymptotic forms for the energy of force-free magnetic field ion figurations of translational symmetry. Astrophysical Journal, 1994, 431, 870.	4.5	7
122	The possible role of MHD waves in heating the solar corona. Astrophysical Journal, 1994, 435, 482.	4.5	101
123	The possible role of high-frequency waves in heating solar coronal loops. Astrophysical Journal, 1994, 435, 502.	4.5	36
124	The magnetic field of solar prominences. Astrophysical Journal, 1994, 420, L41.	4.5	208
125	The practical application of the magnetic virial theorem. Astrophysical Journal, 1992, 385, 327.	4.5	35
126	Three-dimensional force-free magnetic fields and flare energy buildup. Astrophysical Journal, 1992, 385, 344.	4.5	49

#	Article	IF	Citations
127	Cylindrically symmetric force-free magnetic fields. Astrophysical Journal, 1992, 385, 738.	4.5	27
128	Simulated SXT observations of coronal loops. , 1991, , 297-301.		2
129	A model for the formation of solar prominences. Astrophysical Journal, 1991, 378, 372.	4.5	134
130	Shear-induced inflation of coronal magnetic fields. Astrophysical Journal, 1990, 354, 745.	4.5	26
131	Episodic coronal heating. Astrophysical Journal, 1990, 356, L31.	4.5	40
132	Magnetic properties of Civ Doppler shift patterns. Solar Physics, 1989, 119, 19-34.	2.5	10
133	Force-free magnetic fields - Is there a 'loss of equilibrium'?. Astrophysical Journal, 1989, 345, 1034.	4.5	68
134	Heating-related flows in cool solar loops. Astrophysical Journal, 1988, 328, 334.	4.5	27
135	Coronal magnetic fields produced by photospheric shear. Astrophysical Journal, 1988, 335, 456.	4.5	23
136	The magnetic and velocity structure adjacent to solar active regions. Astrophysical Journal, 1987, 318, 437.	4.5	3
137	A numerical study of the nonlinear thermal stability of solar loops. Astrophysical Journal, 1987, 320, 409.	4.5	49
138	On the large-scale dynamics and magnetic structure of solar active regions. Astrophysical Journal, 1987, 323, 368.	4.5	44
139	Magnetic shear. IV - Hale regions 16740, 16815, and 16850. Astrophysical Journal, 1986, 303, 884.	4.5	5
140	Outflow from the sun's polar corona. Astrophysical Journal, 1983, 266, L65.	4.5	23
141	Measurements of outflow from the base of solar coronal holes. Astrophysical Journal, 1982, 260, 326.	4.5	63
142	Measurement of systematic outflow from the solar transition region underlying a coronal hole. Astrophysical Journal, 1981, 247, L135.	4.5	20
143	Theory of Coronal Mass Ejections. Geophysical Monograph Series, 0, , 143-157.	0.1	64